Canada's Forest Inventory 1981

G.M. Bonnor

Forestry Statistics & Systems Branch
Canadian Forestry Service

Environment Canada
Canada

Forestry Statistics and Systems Branch
Canadian Forestry Service

The Forestry Statistics and Systems Branch (FSSB), established in 1980, is responsible for the acquisition, summary and publication of forest resource data on the national level. It is dedicated to improving and expanding the information available on these resources, and to developing efficient methods for that purpose.

Through the Canadian Forest Inventory Committee, the FSSB works in close cooperation with provincial forest agencies, to discuss and make recommendations on forest inventory procedures, and to acquire data for national summaries.

The FSSB has an active Program that includes the acquisition of federal forest resource data, improvement of such data, and standardization within the Federal Government of data collecting methods.

Through the Canadian Forest Resource Data Program, which involves all Regional Research Centres of the Canadian Forestry Service (CFS), the FSSB coordinates data acquisition and analysis within the CFS.

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by
G.M. Bonnor

Forestry Statistics and Systems Branch
Canadian Forestry Service
Department of the Environment

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Foreword

Recently, the need for better forest resource data has become apparent: forest management, planning, and policy making must be intensified to make better use of our forest resources.

The Canadian Forestry Service (CFS) is dedicated to producing and publishing such improved data, as shown by this report. As a nationwide summary of forest inventory data, this report is more complete, accurate, and location specific than any that have preceded it. It has been produced by a computer-based system that represents a significant advance in our ability to summarize data at the national and provincial levels, to update summaries, and to respond quickly to requests for more detailed data. Such requests for special summaries are welcomed. They should be addressed to:

Forestry Statistics and Systems Branch
Canadian Forestry Service
Environment Canada
Ottawa, Ont., Canada
K1A 1G5

The Canadian Forestry Service recognizes that better inventory data alone are not sufficient; better data on changes in our forest resources are also required. The CFS is actively pursuing the development of such data in cooperation with provincial forest agencies. When available, the computer-based system will be used to summarize and map these data.

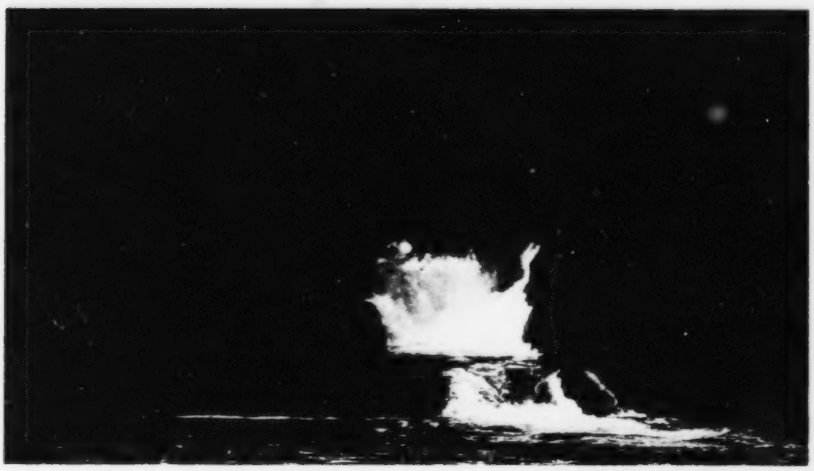
R.E. Keen
Director
Forestry Statistics and Systems Branch

Acknowledgments

This report could not have been produced without the active interest and cooperation of the Canadian Forest Inventory Committee, which includes all Provincial and Territorial chiefs of forest inventory (*see* inside back cover).

The extra effort and dedication by FSSB staff in summarizing the data, and by the Geocartographics Group of Statistics Canada in producing the maps, is also acknowledged.

Finally, contributions by members of the CFS Regional Committee on FORSTATS are appreciated.



Highlights

A newly developed computer-based system has been used to summarize data obtained from provincial and federal forest agencies. The summaries are more accurate, detailed, and location specific than previous ones. Comparisons to estimate changes should not be made because they may reflect changes in methodology only.

1. The total area of Canada is 9.9 million km^2. Of this, 44% or 4.4 million km^2 is forest land with a wood volume of about 23 billion m^3. In comparison with Europe, our forest land is three times as large, our wood volume twice as large.
2. Of the forest land, 2.2 million km^2 is inventoried, productive forest land of which:
   - About 80% is provincially owned, 11% federally owned, and 8% privately owned. Within the provinces, federal ownership is 2%.
   - Most inventories (63% by area) are less than 10 years old; a few (8%) are more than 20 years old.
   - 229 000 km^2 or 10% is nonstocked.
   - 49 000 km^2 or 2% is reserved.
   - On the 1.9 million km^2 of stocked, productive, nonreserved forest land:
     (a) Age classification is as follows: regeneration (8%), immature (45%), mature (36%), and overmature (3%). Seven percent of the area is not classified by age.
     (b) Site classification is as follows: Class 1 (the lowest) – 16%, Class 2 – 23%, Class 3 – 19%, Class 4 or better – 3%. Thirty-nine percent of the area is not classified by site quality.
     (c) Forest type classification is as follows: softwood – 65%, mixedwood – 23%, and hardwood – 12%.
     (d) The total wood volume is 19.5 billion m^3; 79% is coniferous and 21% is deciduous. The predominant species groups are spruce – 31%, pine – 16%, balsam fir – 14%, and aspen/poplar – 11%.

Introduction

This report of Canada's forest resources is the first to include maps of the resources. Also, the tabular summaries are more detailed and accurate than before. These improvements result from the use of computer methodology: the basic data are stored, manipulated, and summarized by computer using the newly developed "Canadian Forest Resource Data System" (CFRDS).

The report is similar to its predecessors in that it focuses on the areas and wood volumes available for harvesting purposes and therefore of greatest economic interest. Also, the inventory data at the provincial, territorial, and national levels are summarized for planning and policy purposes. Finally, emphasis is placed on objective presentation of the most pertinent data with little attempt at interpretation.

The inventory data are presented at three levels of detail:

(a) In Chapter 1, nationwide totals are presented for the first time. They include *all* forest lands in Canada, whether or not the lands have been inventoried. Accordingly, some data are broad estimates;
(b) Data on Canada's productive forest base are summarized in Chapter 2. Only those areas that have been inventoried and for which detailed data have been made available are included;
(c) Detailed tables of the data summarized in Chapter 2 are given in Appendices 3 and 4.

This report is the official document on Canada's forest inventory. It is the latest in a series produced by the Canadian Forestry Service at approximately 5-year intervals and supercedes all previous reports.

Chapter 1
National totals

Of Canada's total area of 9.9 million km^2, only 20% (Figure 1) is stocked, productive, nonreserved forest land, i.e., land currently producing wood fiber that is available for harvesting. Figure 1 also shows that 2% is nonstocked, i.e., not producing wood fiber, and 1% is reserved, i.e., no harvesting is permitted. Further, 12% is unproductive (the site quality is very low), 9% is noninventoried (the forest resources may not be worth the cost of an inventory), 48% is nonforest (primarily tundra), and 8% is water.

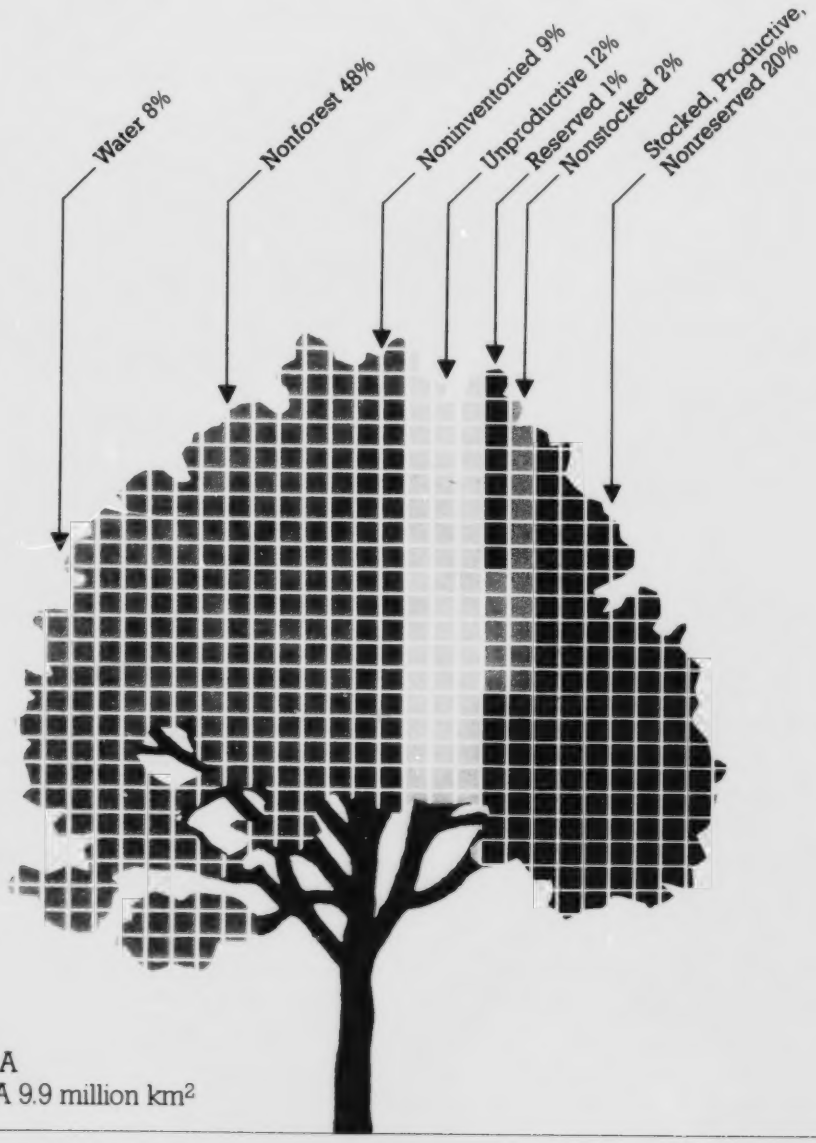


Figure 1. Forest lands of Canada.

More detailed information is presented in Table 1. Each of the three forestry attributes (area of forest land, area of productive forest land, and wood volumes) is shown as the sum of inventoried and noninventoried subtotals.

Although the "inventoried" data tend to be accurate, the "noninventoried" data generally are not; they are broad estimates made either by provincial or federal agencies. Nevertheless, the totals show, for the first time, the whole extent of our forest base: 4.4 million km^2 of forest land, 2.6 million km^2 of productive forest land, and a total volume of 23 billion m^3.

Table 1. National totals of areas and wood volumes

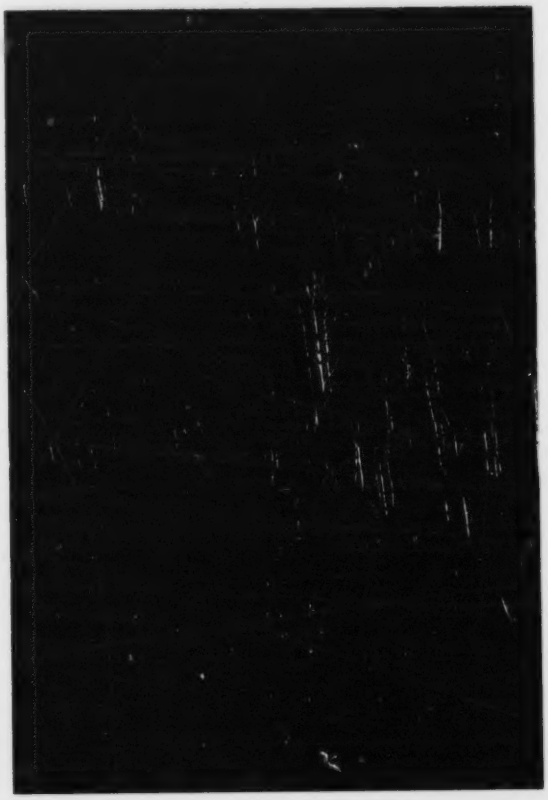
Province or Territory	Area of Land*	Area of Water*	Total Area*	Area of Forest Land			Area of Productive Forest Land			Wood Volumes		
				Inventoried	Non-inventoried	Total	Inventoried	Non-inventoried	Total	Inventoried	Non-inventoried	Total
	1 000 km^2									1 000 000 m^3		
Newfoundland	371	34	405	142	0	142	85	0	85	464	0	464
Prince Edward Island	6	0	6	3	0	3	3	0	3	33	0	33
Nova Scotia	53	3	55	41	0	41	29	0	29	219	0	219
New Brunswick	72	2	73	65	0	65	62	0	62	516	0	516
Quebec	1 357	184	1 541	624	316**	940	533	316**	849	4 139	790†	4 929
Ontario	891	177	1 069	432	375†	807†	377	49†	426	3 291	308†	3 599
Manitoba	548	102	650	240	109**	349	139	–	139	642	103†	745
Saskatchewan	570	82	652	123	55**	178	89	–	89	524	84†	608
Alberta	644	17	661	331	18†	349	216	18†	234	1 447	54†	1 501
British Columbia	931	18	949	566	67*††	633	458	57*††	515	7 945	1 786*††	9 731
All Provinces§	5 442	618	6 060	2 567	940	3 507	1 991	440	2 431	19 220	3 125	22 345
Yukon Territory	478	4	482	242	0	242	67	0	67	255	0	255
Northwest Territories	3 246	133	3 380	615	0	615	143	0	143	446	0	446
Canada§	9 167	755	9 922	3 424	940	4 364	2 201	440	2 641	19 921	3 125	23 046

* Source: Canada Year Book (1980-81)
** Source: Provincial estimates
† Source: CFS estimates
†† Inventoried but detailed summaries not available (not on provincial Mark IV file)
§ Totals may not add due to rounding
– Data not available

Chapter 2
Inventoried areas and wood volumes

The inventory data presented in this report are obtained from provincial and federal forest agencies and summarized using the Canadian Forest Resource Data System (CFRDS), which is a computer-based system for the input, manipulation, and output of forest resource data. It has two special features:

(1) the basic data are summarized by "cells" or areas having a target size of 100 km^2. These cells are used by the provinces or territories for summary purposes and may be townships or map sheets. Across Canada, about 40 000 cells are used to store the inventory data;
(2) the summary output is in the form of tables and maps, both generated by computer. The maps are called choropleth maps; they depict the information associated with each cell, not physical features.



Details on the methods used in CFRDS to summarize the data are given in Appendix 1. They include forestry terms and definitions, area classification system, and computer formats, classes, and codes.

Some differences exist among the provinces and territories in the kind of volumes reported and in the merchantability standards (minimum size of tree reported). These differences are listed in Appendix 2.

Appendices 3 and 4 consist of the detailed tables upon which this chapter is based. They form the core of the report.

Extent and Quality of Inventory

Map No. 1 shows the area inventoried as well as the age of inventory. The northern inventory boundary tends to fall south of the tree line, which separates "predominantly tundra" from "predominantly forest." The boundary does not extend to the tree line, indicating that the forest is of very low productivity. To the south, inventories cover all forested land: this is where the most accessible, fastest-growing forests occur. Additional areas have been inventoried (in southern Ontario, British Columbia), but detailed data are not available. As Table 1 shows, the inventory coverage includes 79% of the forest land, 83% of the productive forest land, and 86% of the wood volume.

In regard to age of inventory, the map indicates that most of the older data are in Alberta. However, this province is preparing a new inventory and the data will be available in 1984.

The age and types of inventory are shown in Table 2. Management inventories, yielding the most detailed and accurate data, cover the largest area (52%). Reconnaissance inventories, the least detailed and accurate, are second. However, they are used mostly in the northern, less productive forests (the Territories and Labrador). Most inventories (64%) are less than 10 years old.

Table 2. Area of forest land by age and type of inventory

Type of Inventory	Age of Inventory			Total
	Less than 10 Years	10–20 Years	More than 20 Years	
	% of forest land			
Reconnaissance	14	10	7	31
Regional	8	5	1	14
Management	39	13	0	52
Other	3	0	0	3
Total	64	28	8	100

Map No. 1
Age of inventory

The information mapped for each cell is the age of inventory data available for each cell. These ages are grouped into 10-year classes and mapped giving each class a color. Cells for which no inventory data are available are classified as Predominantly Forest.

Inventoried Area by
Province and Territory and Mapped Classes of Inventory Age

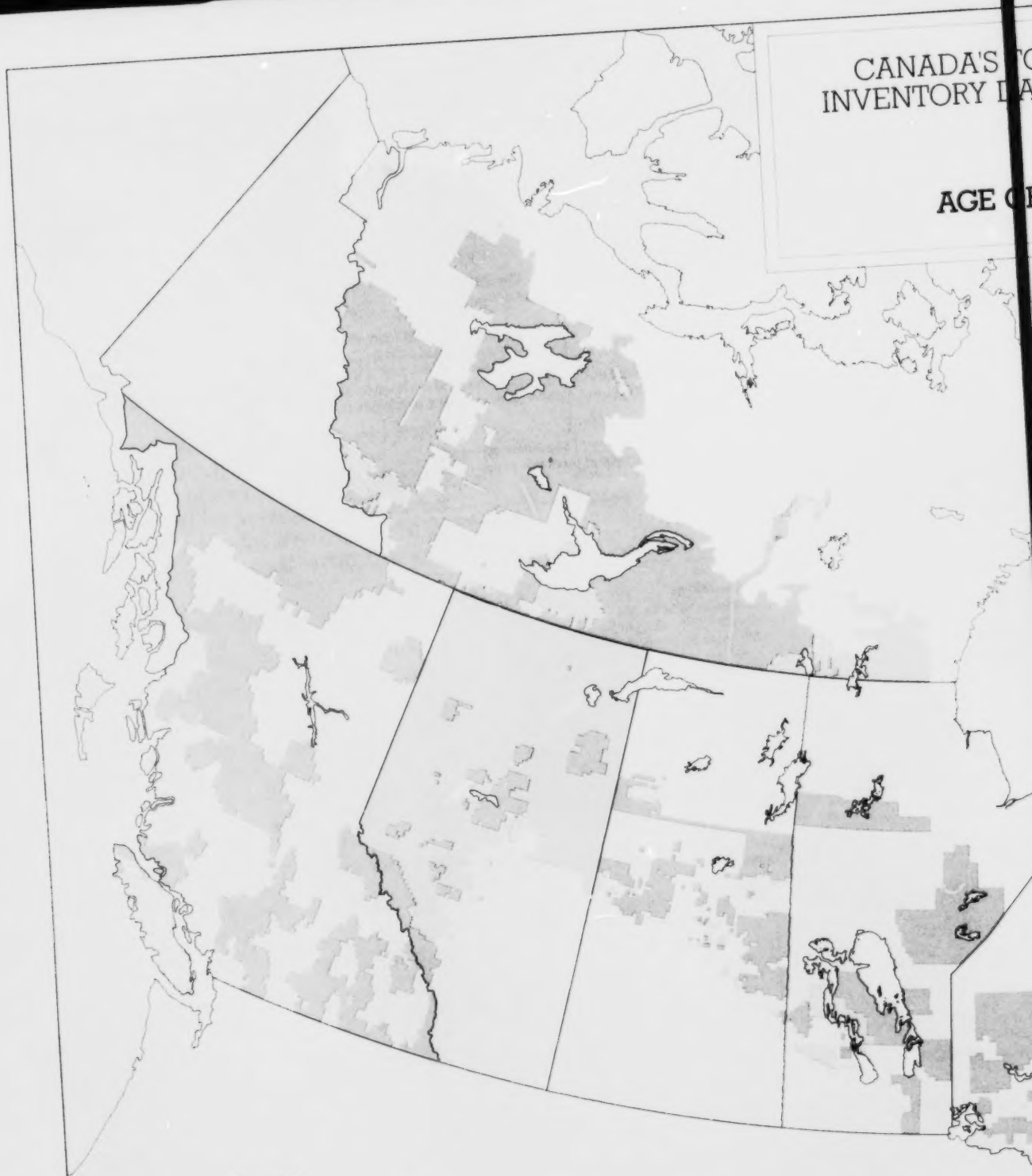
Province or Territory	Inventory Age Classes (Years Old)			Total
	0-<10	10-<20	20+	
	Area (1 000 km²)			
Newfoundland	292 24	67 08	0 00	359 32
Nova Scotia	55 41	0 00	0 00	55 41
Prince Edward Island	5 75	0 00	0 00	5 75
New Brunswick	72 76	0 15	0 00	72 92
Quebec	603 60	129 19	0 00	732 79
Ontario	304 22	176 49	43 13	523 84
Manitoba	136 88	185 98	10 09	332 95
Saskatchewan	83 11	75 87	2 11	161 47
Alberta	77 54	16 02	368 54	462 09
British Columbia	470 40	368 71	0 00	839 12
Yukon Territory	0 00	482 69	0 00	482 69
Northwest Territories	695 58	277 05	120 29	1 092 92
Total	2 797 49	1 779 23	544 16	5 121 26

Note: Totals may not add due to rounding.

This choropleth map is produced from data summarized by cells. These cells are map polygons having a target size of 100 km². but they may range as high as 3 000 km². The map contains about 40 000 such cells.

The map is largely produced by computer. First, the cell boundaries are digitized, i.e. they are converted into numbers that are stored in the computer. Also, major geographic and jurisdictional boundaries are digitized. Second, the forest inventory data are stored, by cell, in the computer. The link between cell boundaries and cell data is the cell reference number.

To produce a map, the cell boundaries and the cell data are linked in the computer and transmitted to a plotter, which produces the map. Additional information regarding map legend, classes, and text is also transmitted to the plotter.



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PREPARE POUR LA DIRECTION DE LA STATISTIQUE FORESTIÈRE ET DES SYSTÈMES, SERVICE CANADIEN DES FORÊTS,
PAR LA SOUS-DIVISION GEOCARTOGRAPHIQUE STATISTIQUE CANADA, 1982.

REST RESOURCES
TA 1981 SUMMARY

RESSOURCES FORESTIÈRES DU CANADA
DONNÉES D'INVENTAIRE SOMMAIRE 1981

INVENTORY

Map/Carte 1

ÂGE D'INVENTAIRE

Carte n° 1
Âge d'inventaire

Sur cette carte, l'information fournie par les quadrilatères est l'âge d'inventaire des données disponibles pour chacun d'eux. Ces âges sont groupés par classes de 10 ans et reproduits en donnant une couleur à chaque classe. Les quadrilatères pour lesquels les données d'inventaires ne sont pas disponibles sont classés comme étant à prédominance forestière.

Superficie inventoriée par province et territoire et par classe d'âge d'inventaire

Province ou territoire	Classes d'âge (années)			Total
	0-<10	10-<20	20+	
	Superficie (1 000 km²)			
Terre-Neuve	292.24	67.08	0.00	359.32
Nouvelle-Écosse	55.41	0.00	0.00	55.41
Île-du-Prince-Édouard	5.75	0.00	0.00	5.75
Nouveau-Brunswick	72.76	0.15	0.00	72.92
Québec	603.60	129.19	0.00	732.79
Ontario	304.22	176.49	43.13	523.84
Manitoba	136.88	185.98	10.09	332.95
Saskatchewan	83.11	75.87	2.11	161.47
Alberta	77.54	16.02	368.54	462.09
Colombie-Britannique	470.40	368.71	0.00	839.12
Yukon	0.00	482.69	0.00	482.69
Terr. du Nord-Ouest	695.58	277.05	120.29	1 092.92
Total	2 797.49	1 779.23	544.16	5 121.26

Note : Les totaux peuvent ne pas être exacts, certains chiffres étant arrondis.

Cette carte thématique est produite à partir des données exprimées par des quadrilatères. Ce sont des polygones cartographiques ayant une surface cible de 100 km², mais qui peuvent mesurer jusqu'à 3 000 km². La carte comprend environ 40 000 quadrilatères.

La carte est produite en grande partie par l'ordinateur. D'abord les limites des quadrilatères sont numérisées, c'est-à-dire converties en nombres, et emmagasinées dans l'ordinateur. Les frontières géographiques et politiques sont également numérisées. Ensuite, les données de l'inventaire forestier sont mises en mémoire par quadrilatère. Le lien entre les limites et les données des quadrilatères constitue leur numéro de référence.

Pour produire une carte, les limites et les données des quadrilatères sont liées dans l'ordinateur et transmises à un traceur, lequel dessine la carte. Les informations additionnelles concernant la légende de la carte ainsi que les classes et le texte sont également transmises au traceur.

Forest Land

Map No. 2 (Area of Forest Land) shows the density of forest land across Canada. Forest cover is limited by agriculture (the Maritimes, southern Quebec, Ontario, and the Prairies), or by adverse climatic conditions (the Prairies, Northern Canada, British Columbia).

Map No. 3 (Ownership and Status of Forest Land) indicates the location across Canada of major federal and provincial reserved lands, mostly national and provincial parks. It also confirms that most private forest lands are in Eastern Canada. The majority of forest land is nonreserved, however, meaning that timber harvesting is permitted.

Of the 3.4 million km^2 of inventoried forest land, 27% is federally owned, 67% is provincially owned, and 6% is privately owned (Table N 2, Appendix 3). The federal ownership is concentrated in the Territories (25%) with only 2% located within provincial boundaries (Table P 3, Appendix 4).

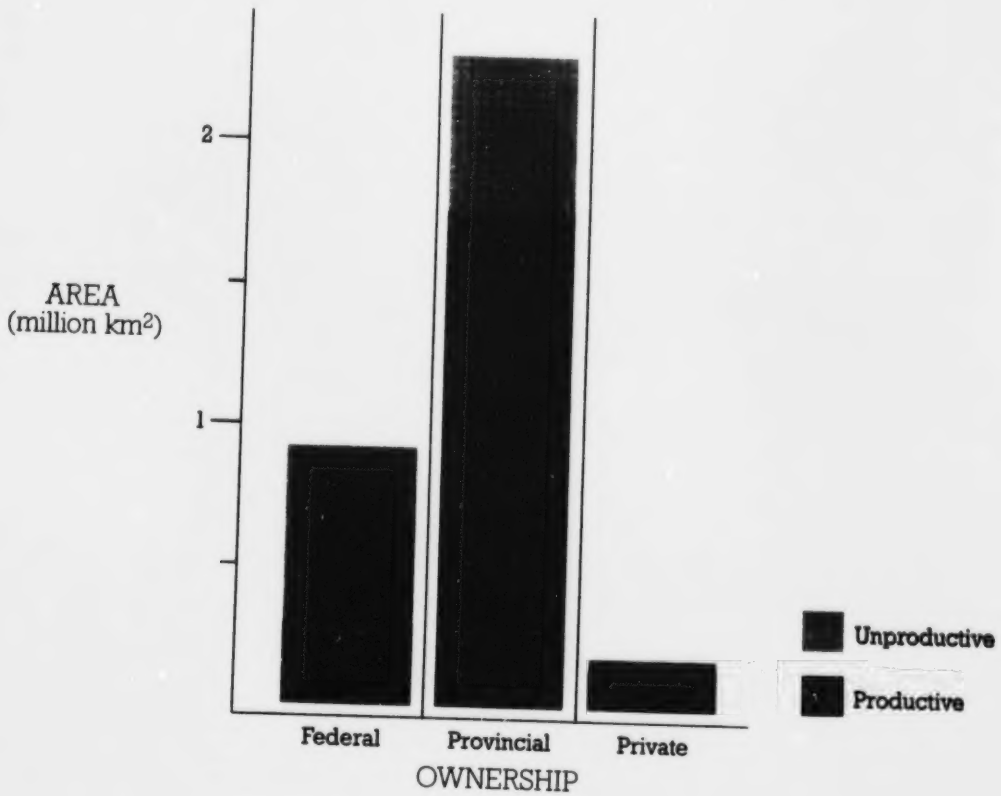

Figure 2. Area of forest land by ownership and productivity.

Most of the federal forest land is unproductive, whereas most of the provincial forest land is productive (Figure 2). The proportion of private forest land that is unproductive is small.

Of the 2.2 million km^2 of productive forest land, only 2.2% is reserved, i.e. not available for harvesting (Table N 3, Appendix 3). By ownership, the federal percentage is high (14% reserved), whereas the provincial percentage is low (0.8%). No private lands are reserved because the reserved status is normally associated with parks.

Also, 10% of the productive forest land is nonstocked, i.e. lacking tree growth (Table N 2, Appendix 3). By ownership, the percentages are about equal.

Map No. 2
Area of Forest Land

The information mapped for each cell is the area of forest land expressed as a percentage of total cell area: the percentages are calculated for every cell, grouped into four classes, and mapped giving each class a color. Cells that do not have any data on forest land are classified as Predominantly Forest.

Area of Forest Land by Province and Territory and Mapped Classes of Forest Land

Province or Territory	Forest Land Area (% of Total Cell Area)			Total
	>0 - <50	50 - <75	75 - 100	
	Area (1 000 km²)			
Newfoundland	31.09	35.21	76.10	142.40
Nova Scotia	0.00	19.38	22.11	41.49
Prince Edward Island	0.80	1.64	0.50	2.94
New Brunswick	0.68	5.52	58.32	64.52
Quebec	6.79	51.48	565.73	624.01
Ontario	8.41	36.12	387.39	431.92
Manitoba	14.37	40.63	184.75	239.75
Saskatchewan	4.41	21.94	97.08	123.43
Alberta	24.28	63.41	243.16	330.85
British Columbia	62.54	106.60	397.11	566.26
Yukon Territory	48.90	129.93	63.33	242.17
Northwest Territories	51.13	104.87	459.20	615.21
Total	253.41	616.74	2 554.79	3 424.94

Note: Totals may not add due to rounding.

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The map is largely produced by computer. First, the cell boundaries are digitized, i.e. they are converted into numbers that are stored in the computer. Also, major geographic and jurisdictional boundaries are digitized. Second, the forest inventory data are stored, by cell, in the computer. The link between cell boundaries and cell data is the cell reference number.

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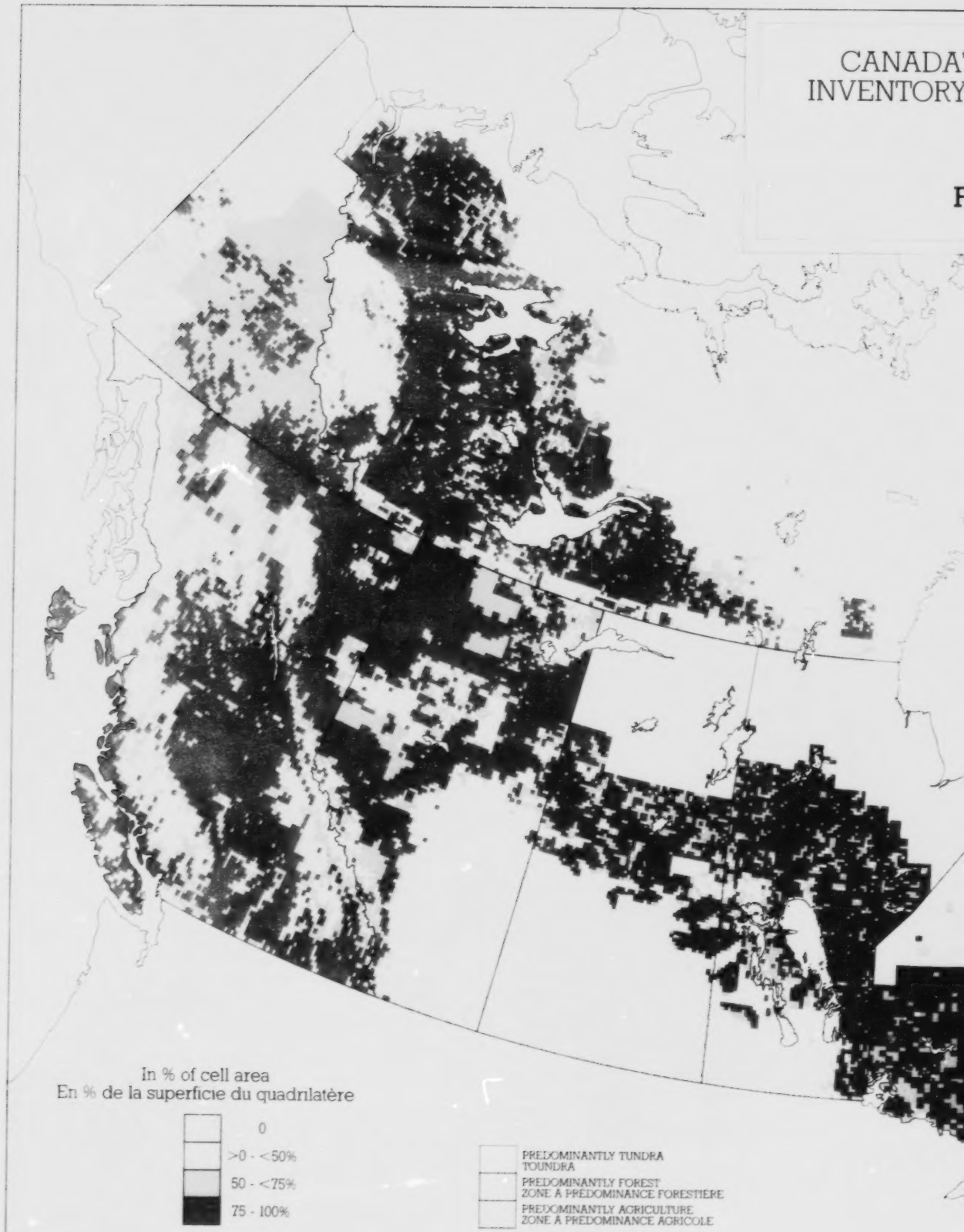

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FOREST RESOURCES
DATA 1981 SUMMARY

RESSOURCES FORESTIÈRES DU CANADA
DONNÉES D'INVENTAIRE SOMMAIRE 1981

AREA OF REST LAND

Map/Carte 2

SUPERFICIE DES TERRES FORESTIÈRES

Carte n° 2
Superficie des terres forestières

Sur cette carte, l'information fournie par chaque quadrilatère est la superficie des terres forestières, exprimée en pourcentage de la superficie totale des quadrilatères. les pourcentages sont calculés pour chacun d'eux, groupés en quatre classes et reproduits en donnant une couleur à chaque classe. Les quadrilatères pour lesquels les données d'inventaire ne sont pas disponibles sont classés comme étant à prédominance forestière.

Superficie des terres forestières
par province et territoire et par classe de superficie des terres forestières

Province ou territoire	Superficie des terres forestières (en % de la superficie totale des quadrilatères)			Total
	>0-<50	50-<75	75-100	
	Superficie (1 000 km²)			
Terre-Neuve	31.09	35.21	76.10	142.40
Nouvelle-Ecosse	0.00	19.38	22.11	41.49
Île-du-Prince-Edouard	0.80	1.64	0.50	2.94
Nouveau-Brunswick	0.68	5.52	58.32	64.52
Québec	6.79	51.48	565.73	624.01
Ontario	8.41	36.12	387.39	431.92
Manitoba	14.37	40.63	184.75	239.75
Saskatchewan	4.41	21.94	97.08	123.43
Alberta	24.28	63.41	243.16	330.85
Colombie-Britannique	62.54	106.60	397.11	566.26
Yukon	48.90	129.93	63.33	242.17
Terr. du Nord-Ouest	51.13	104.87	459.20	615.21
Total	253.41	616.74	2 554.79	3 424.94

Note: Les totaux peuvent ne pas être exacts, certains chiffres étant arrondis.

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Pour produire une carte, les limites et les données des quadrilatères sont liées dans l'ordinateur et transmises à un traceur, lequel dessine la carte. Les informations additionnelles concernant la légende de la carte ainsi que les classes et le texte sont également transmises au traceur.

Map No. 3
Ownership and Status of Forest Land

The information mapped for each cell is ownership and status: the area of each class is calculated and the class having the largest area (the dominant class) is assigned to the whole cell for mapping purposes. Cells that do not have any ownership or status data are classified as Predominantly Forest.

Area of Forest Land by
Province and Territory and Mapped Classes of Ownership and Status

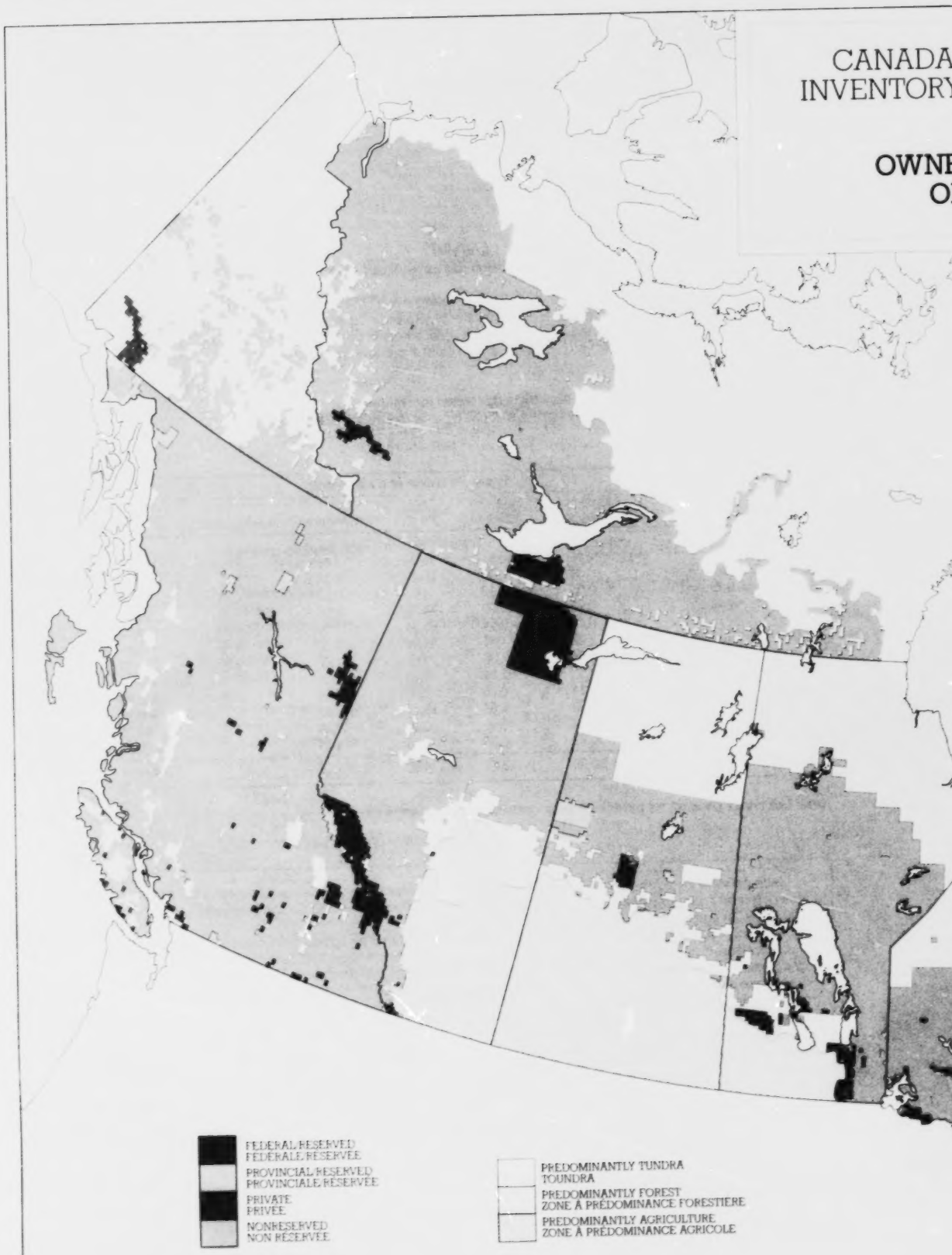
Province or Territory	Ownership and Status Classes					Total
	Federal/ Reserved	Provincial/ Reserved	Private	Nonreserved	Undetermined	
	Area (1 000 km²)					
Newfoundland	1.46	0.11	5.98	134.84	0.01	142.40
Nova Scotia	0.34	0.00	29.43	8.02	3.70	41.49
Prince Edward Island	0.00	0.00	0.00	0.00	2.94	2.94
New Brunswick	0.32	0.00	32.40	31.80	0.00	64.52
Quebec	0.49	0.14	66.34	557.04	0.00	624.01
Ontario	2.02	1.54	43.44	378.73	6.18	431.92
Manitoba	2.36	1.39	4.61	231.39	0.00	239.75
Saskatchewan	3.16	8.79	0.00	111.48	0.00	123.43
Alberta	33.74	0.10	0.00	296.96	0.06	330.85
British Columbia	3.39	6.58	16.79	539.49	0.00	566.26
Yukon Territory	2.12	0.00	0.00	67.26	172.80	242.17
Northwest Territories	10.97	0.00	0.00	604.24	0.00	615.21
Total	60.36	18.65	199.00	2 961.25	185.68	3 424.94

Note: Totals may not add due to rounding.

This choropleth map is produced from data summarized by cells. These cells are map polygons having a target size of 100 km². but they may range as high as 3 000 km². The map contains about 40 000 such cells.

The map is largely produced by computer. First, the cell boundaries are digitized, i.e. they are converted into numbers that are stored in the computer. Also, major geographic and jurisdictional boundaries are digitized. Second, the forest inventory data are stored, by cell, in the computer. The link between cell boundaries and cell data is the cell reference number.

To produce a map, the cell boundaries and the cell data are linked in the computer and transmitted to a plotter, which produces the map. Additional information regarding map legend, classes, and text is also transmitted to the plotter.



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BY THE GEOCARTOGRAPHICS SUB DIVISION, STATISTICS CANADA, 1982.

PRÉPARÉ POUR LA DIRECTION DE LA STATISTIQUE FORESTIÈRE ET DES SYSTÈMES, SERVICE CANADIEN DES FORÊTS
PAR LA SOUS-DIVISION GÉOCARTOGRAPHIQUE STATISTIQUE CANADA, 1982

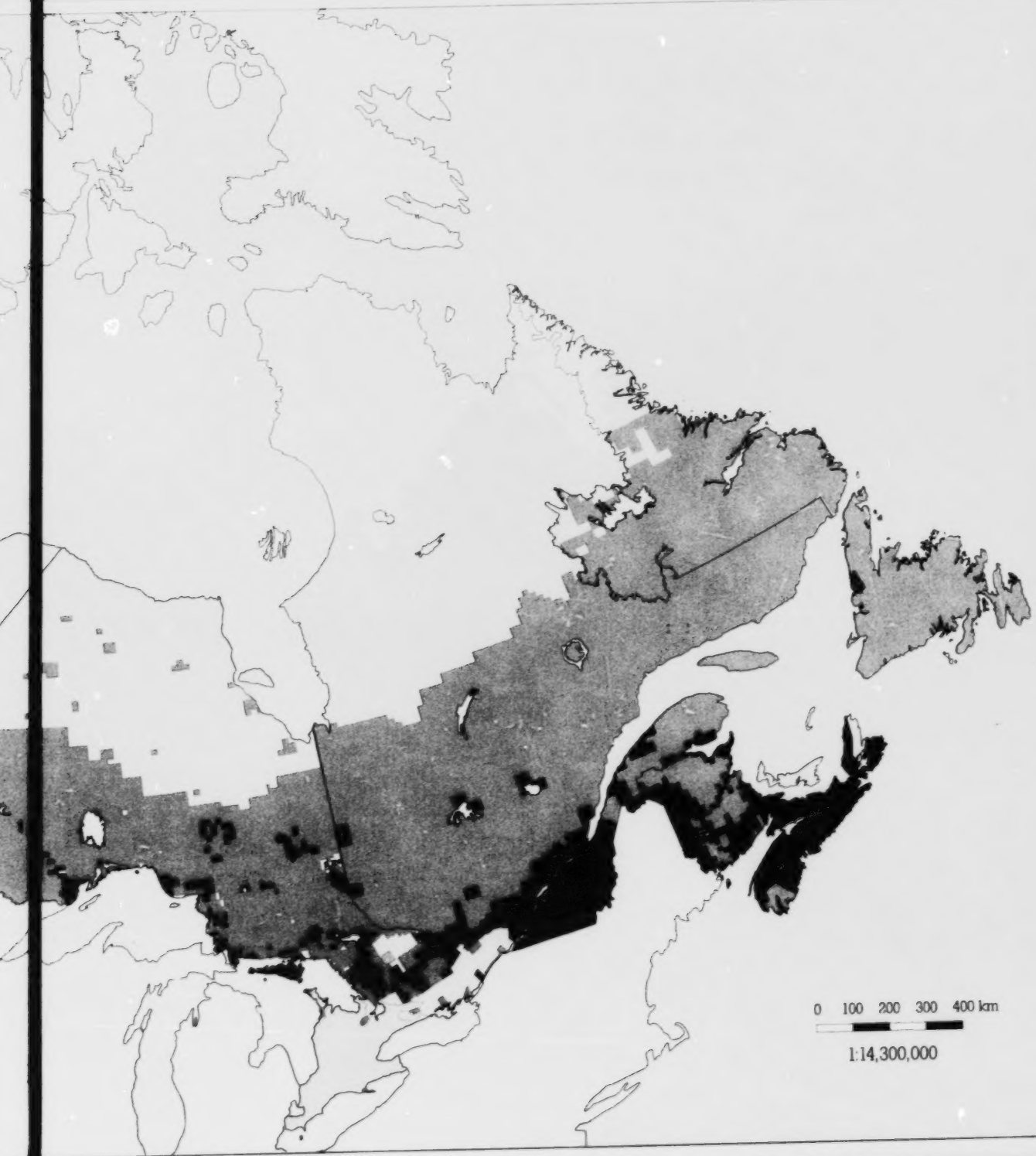
S FOREST RESOURCES
DATA 1981 SUMMARY

RESSOURCES FORESTIÈRES DU CANADA
DONNÉES D'INVENTAIRE SOMMAIRE 1981

RSHIP AND STATUS
FOREST LAND

Map/Carte 3

TENURE ET AFFECTATION
DES TERRES FORESTIÈRES



Carte n° 3
Tenure et affectation des terres forestières

Sur cette carte, l'information fournie par chaque quadrilatère est le type de tenure et d'affectation, la superficie de chaque type est calculée et le type ayant la plus grande superficie (le type dominant) est assigné au quadrilatère pour les besoins de la carte. Les quadrilatères dont on ne connaît pas les données relatives à la tenure et à l'affectation sont classés comme étant à prédominance forestière.

Superficie des terres forestières
par province et territoire et par type de tenure et d'affectation

Province ou territoire	Types de tenure et d'affectation					Total
	Fédéral/ Réservé	Provincial/ Réservé	Privé	Nonréserve	Indéterminé	
	Superficie (1 000 km²)					
Terre-Neuve	1.46	0.11	5.98	134.84	0.01	142.40
Nouvelle-Écosse	0.34	0.00	29.43	8.02	3.70	41.49
Île-du-Prince-Édouard	0.00	0.00	0.00	0.00	2.94	2.94
Nouveau-Brunswick	0.32	0.00	32.40	31.80	0.00	64.52
Québec	0.49	0.14	66.34	557.04	0.00	624.01
Ontario	2.02	1.54	43.44	378.73	6.18	431.92
Manitoba	2.36	1.39	4.61	231.39	0.00	239.75
Saskatchewan	3.16	8.79	0.00	111.48	0.00	123.43
Alberta	33.74	0.10	0.00	296.96	0.06	330.85
Colombie-Britannique	3.39	6.58	16.79	539.49	0.00	566.26
Yukon	2.12	0.00	0.00	67.26	172.80	242.17
Terr. du Nord-Ouest	10.97	0.00	0.00	604.24	0.00	615.21
Total	60.36	18.65	199.00	2 961.25	185.68	3 424.94

Note: Les totaux peuvent ne pas être exacts, certains chiffres étant arrondis.

Cette carte thématique est produite à partir des données exprimées par des quadrilatères. Ce sont des polygones cartographiques ayant une surface cible de 100 km², mais qui peuvent mesurer jusqu'à 3 000 km². La carte comprend environ 40 000 quadrilatères.

La carte est produite en grande partie par l'ordinateur. D'abord les limites des quadrilatères sont numérisées, c'est-à-dire converties en nombres, et emmagasinées dans l'ordinateur. Les frontières géographiques et politiques sont également numérisées. Ensuite, les données de l'inventaire forestier sont mises en mémoire par quadrilatère. Le lien entre les limites et les données des quadrilatères constitue leur numéro de référence.

Pour produire une carte, les limites et les données des quadrilatères sont liées dans l'ordinateur et transmises à un traceur, lequel dessine la carte. Les informations additionnelles concernant la légende de la carte ainsi que les classes et le texte sont également transmises au traceur.

Map No. 4
Area of Stocked, Productive Forest Land

The information mapped for each cell is the area of stocked, productive forest land, expressed as a percentage of total cell area. The percentages are calculated for each cell, grouped into four classes, and mapped giving each class a color. Cells that do not have any data on stocked, productive forest land are classified as Predominantly Forest.

Area of Stocked, Productive Forest Land by Province and Territory and Mapped Classes of Stocked, Productive Forest Land

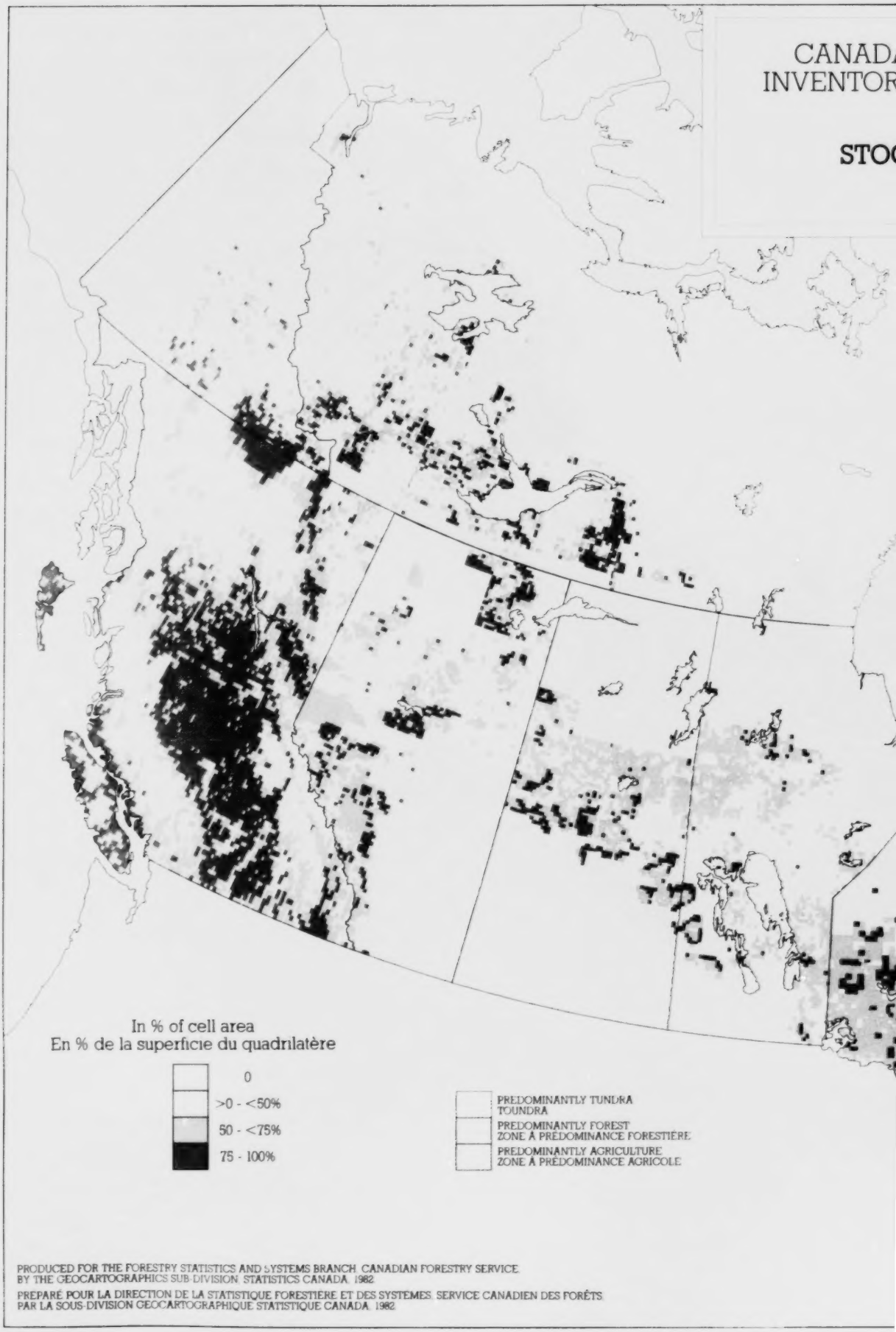
Province or Territory	Stocked, Productive Forest Land Area (% of Total Cell Area)			Total
	>0–<50	50–<75	75–100	
	Area (1 000 km^2)			
Newfoundland	53 77	21 61	4 41	79 79
Nova Scotia	0 00	27 34	1 42	28 77
Prince Edward Island	1 09	1 26	0 12	2 48
New Brunswick	1 09	10 45	47 58	59 12
Quebec	48 43	201 56	239 30	489 29
Ontario	27 13	157 64	154 56	339 33
Manitoba	64 08	50 19	6 79	121 06
Saskatchewan	22 58	44 33	15 48	82 38
Alberta	73 20	53 90	22 80	149 90
British Columbia	100 92	117 37	202 04	420 34
Yukon Territory	22 18	12 00	15 17	49 34
Northwest Territories	62 0[illegible]	40 20	40 71	142 93
Total	476 48	737 85	750 38	1 964 73

Note: Totals may not add due to rouding.

This choropleth map is produced from data summarized by cells. These cells are map polygons having a target size of 100 km^2, but they may range as high as 3 000 km^2. The map contains about 40 000 such cells.

The map is largely produced by computer. First, the cell boundaries are digitized, i.e. they are converted into numbers that are stored in the computer. Also, major geographic and jurisdictional boundaries are digitized. Second, the forest inventory data are stored, by cell, in the computer. The link between cell boundaries and cell data is the cell reference number.

To produce a map, the cell boundaries and the cell data are linked in the computer and transmitted to a plotter, which produces the map. Additional information regarding map legend, classes, and text is also transmitted to the plotter.



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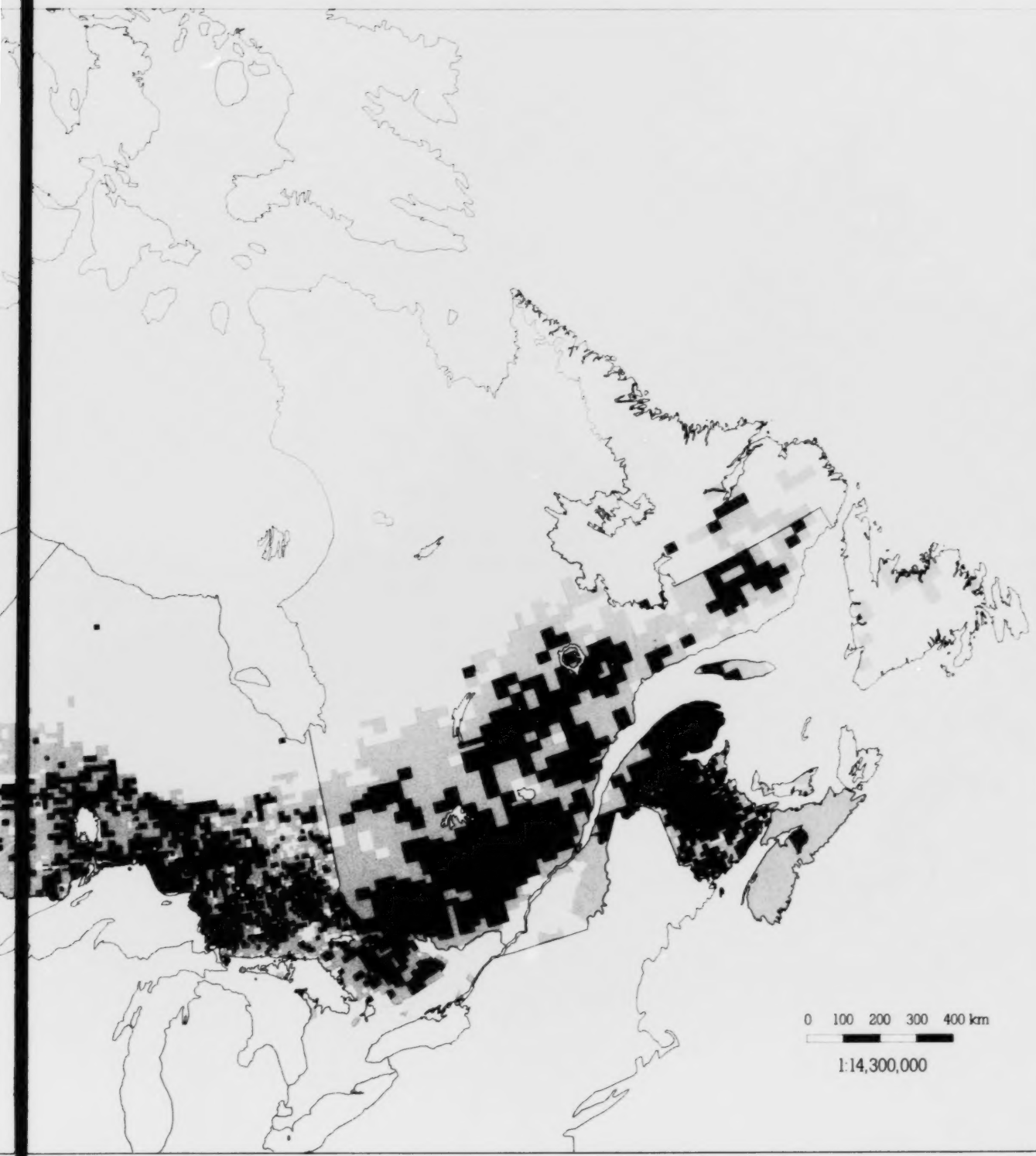
S FOREST RESOURCES
DATA 1981 SUMMARY

RESSOURCES FORESTIÈRES DU CANADA
DONNÉES D'INVENTAIRE SOMMAIRE 1981

AREA OF KD, PRODUCTIVE FOREST LAND

Map/Carte 4

SUPERFICIE DES TERRES FORESTIÈRES BOISÉES ET PRODUCTIVES



Carte nº 4
Superficie des terres forestières boisées et productives

Sur cette carte, l'information fournie par chaque quadrilatère est la superficie des terres forestières boisées et productives, exprimée en pourcentage de la superficie totale du quadrilatère; les pourcentages sont calculés pour chacun d'eux, groupés en quatre classes et reproduits en donnant une couleur à chaque classe. Les quadrilatères dont on ne connaît pas les données sur la superficie des terres forestières boisées et productives sont classés comme étant à prédominance forestière.

Superficie des terres forestières boisées et productives par province et territoire et par classe de superficie des terres forestières boisées et productives

Province ou territoire	Terres forestières boisées et productives (en % de la superficie totale du quadrilatère)			Total
	>0–<50	50–<75	75–100	
	Superficie (1 000 km²)			
Terre-Neuve	53.77	21.61	4.41	79.79
Nouvelle-Écosse	0.00	27.34	1.42	28.77
Île-du-Prince-Édouard	1.09	1.26	0.12	2.48
Nouveau-Brunswick	1.09	10.45	47.58	59.12
Québec	48.43	201.56	239.30	489.29
Ontario	21.13	157.64	154.56	339.33
Manitoba	64.08	50.19	6.79	121.06
Saskatchewan	22.58	44.33	15.48	82.38
Alberta	73.20	53.90	22.80	149.90
Colombie-Britannique	100.92	117.37	202.04	420.34
Yukon	22.18	12.00	15.17	49.34
Terr. du Nord-Ouest	62.02	40.20	40.71	142.93
Total	476.48	737.85	750.38	1 964.73

Note: Les totaux peuvent ne pas être exacts, certains chiffres étant arrondis.

Cette carte thématique est produite à partir des données exprimées par des quadrilatères. Ce sont des polygones cartographiques ayant une surface cible de 100 km², mais qui peuvent mesurer jusqu'à 3 000 km². La carte comprend environ 40 000 quadrilatères.

La carte est produite en grande partie par l'ordinateur. D'abord les limites des quadrilatères sont numérisées, c'est-à-dire converties en nombres, et emmagasinées dans l'ordinateur. Les frontières géographiques et politiques sont également numérisées. Ensuite, les données de l'inventaire forestier sont mises en mémoire par quadrilatère. Le lien entre les limites et les données des quadrilatères constitue leur numéro de référence.

Pour produire une carte, les limites et les données des quadrilatères sont liées dans l'ordinateur et transmises à un traceur, lequel dessine la carte. Les informations additionnelles concernant la légende de la carte ainsi que les classes et le texte sont également transmises au traceur.

Stocked, Productive, Nonreserved Forest Land

This land, and the wood volume it supports, form the economic forest base in Canada. Most of the tables in Appendices 3 and 4 deal with this land. For completeness, the maps depict both reserved and nonreserved lands.

Map No. 4 (Area of Stocked, Productive Forest Land), when compared with Map No. 2 (Area of Forest Land), gives a better picture of the distribution and location of the economic forest base; the greatest concentrations occur in British Columbia, Ontario, Quebec, and New Brunswick. For these four provinces, 73–92% of forest land is stocked, productive, and nonreserved. By way of contrast, the figure for the Northwest Territories is 22%.

Areas and volumes are summarized by ownership in Table 3. As expected, provincial areas and volumes are the largest, at 81 and 89% of the respective totals. The new Municipal ownership class is not very significant; reference to Table P 7 (Appendix 4) indicates it is limited to Manitoba and British Columbia.

The second column in Table 3 (average volumes) shows considerable variation with ownership. The low volume for federal lands is partly a result of the reporting of area but no volume for many parcels of inventoried land, especially National Parks, and partly a result of the low volumes per hectare in the Territories. The low volume for private lands is related to geographic location. Most private lands are located in the Maritimes, where volumes per hectare are lower than the national average.

The status of Crown-owned lands is further subdivided into "retained" land, which is under the direct, immediate control of the Crown, and "assigned" land, such as leased or licensed land, which is not. Tables P 7 A and B (Appendix 4) show that the larger area (85%) of provincial land is retained; most assigned land is found in Eastern Canada.

Table 3. Stocked, productive, nonreserved forest land – areas and wood volumes by ownership

Ownership	Area	Volume	
		Average	Total
	(1 000 km^2)	(m^3/ha)	(1 000 000 m^3)
Federal	197	39	766
Provincial	1 549	113	17 461
Private	164	84	1 377
Municipal	1	102	6
Total	1 911	103	19 610

Another important characteristic is the age of Canada's forests. Originating mostly after fires, harvesting or insect epidemics, they tend to be even-aged. Provincial age classification systems are either numerical and objective using, for example, 20-year age classes, or subjective in the sense that the biological age is given. The latter approach is used in this report; data are converted to and summarized by the following classes: Regeneration, Immature, Mature, Overmatue, or Uneven-aged (*see* Appendix 1 for definitions).

Map No. 5 (Age Class Distribution) indicates that most mature forest land is in Quebec and British Columbia. However, this distribution may result from different provincial definitions of "mature" forest and therefore, conversion to different age classes in this report. A good example is the northern portion of the Ontario-Quebec border, where an apparently similar forest type is called overmature in Ontario and mature in Quebec.

Although it is desirable to have all forest types classified by age, such information is currently available for only about 93% of the stocked, productive, nonreserved forest land (Table P 9, Appendix 4).

Available age class data are summarized in Figure 3 (derived from Tables N 6 and N 11, Appendix 3). The areas shown cumulatively along the X-axis indicate that the immature area is somewhat larger than the mature area. The average volumes displayed along the Y-axis show that the average for the mature area is the largest, at 160 m^3/ha. Values for the other age classes are 11 m^3/ha for regeneration, 79 m^3/ha for immature, 123 m^3/ha for overmature, and 49 m^3/ha for uneven-aged. The area of each rectangle is the product of average volume and total area for each age class and indicates graphically the total volume in each class; again, the mature class has the highest value.

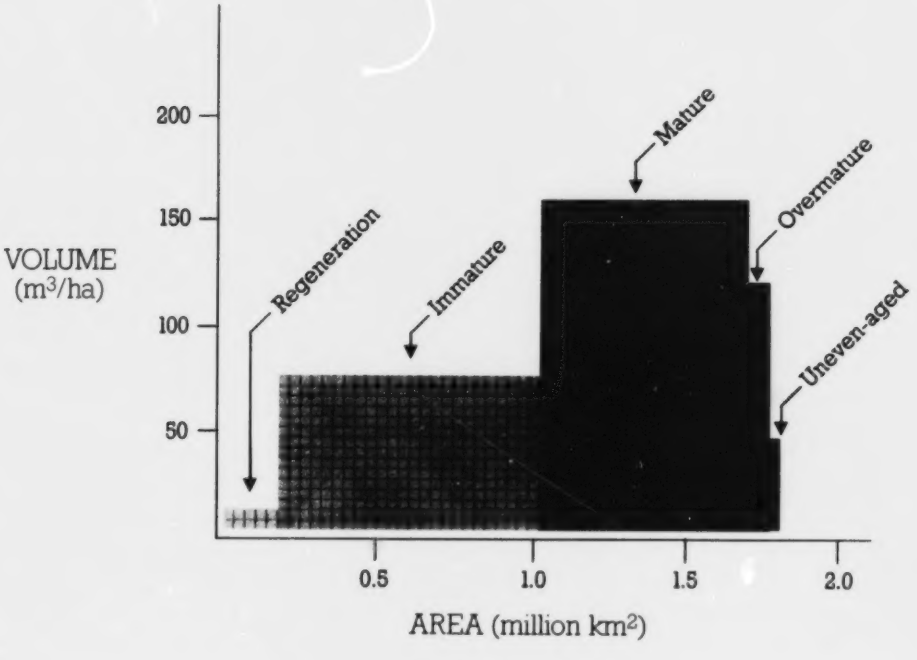


Figure 3. Areas and volumes by age classes.

Map No. 5
Age Class Distribution

The information mapped for each cell is the age class of stocked, productive forest land. The area of each class is calculated and the class having the largest area (the dominant class) is assigned to the whole cell for mapping purposes. Cells that do not have any age class data are classified as Predominantly Forest.

Area of Stocked, Productive Forest Land by Province and Territory and Mapped Age Classes

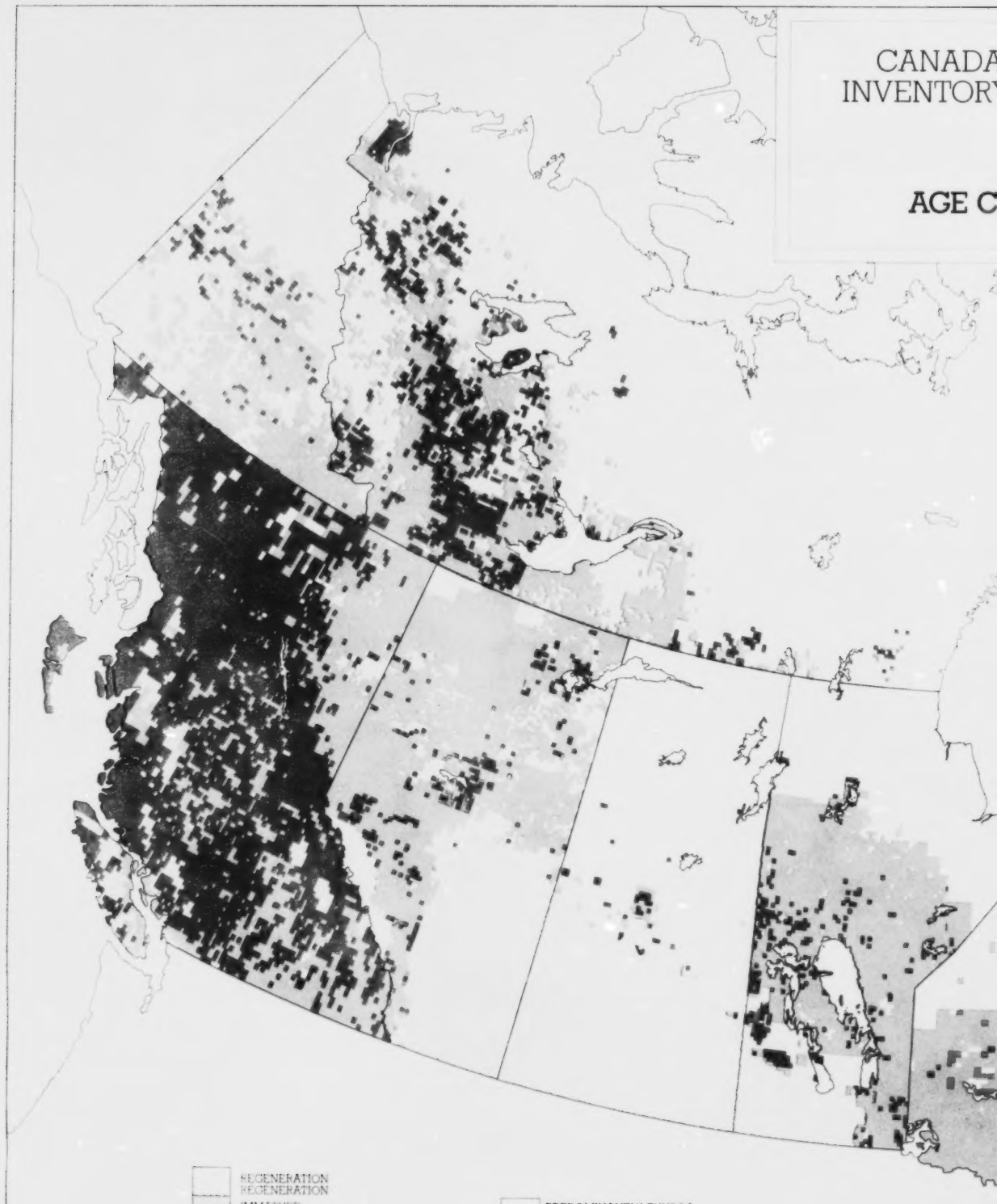
Province or Territory	Age Classes					Total
	Regeneration	Immature	Mature	Overmature	Undetermined	
	Area (1 000 km²)					
Newfoundland	0.08	3.69	7.79	4.63	63.60	79.79
Nova Scotia	0.67	3.58	19.30	5.21	0.00	28.77
Prince Edward Island	0.01	0.00	0.00	0.00	2.47	2.48
New Brunswick	0.24	25.62	30.98	2.28	0.00	59.12
Quebec	69.57	140.81	278.91	0.00	0.00	489.29
Ontario	16.60	238.03	36.11	46.46	0.13	339.33
Manitoba	11.59	86.07	21.56	1.84	0.00	121.06
Saskatchewan	0.15	2.67	1.95	0.01	77.61	82.38
Alberta	19.24	95.72	19.99	7.15	7.79	149.90
British Columbia	18.99	165.27	233.60	1.84	0.63	420.34
Yukon Territory	19.66	26.25	2.94	0.00	0.49	49.34
Northwest Territories	8.04	89.09	45.64	0.15	0.00	142.33
Total	164.85	876.79	700.78	69.56	152.72	1 964.73

Note: Totals may not add due to rounding.

This choropleth map is produced from data summarized by cells. These cells are map polygons having a target size of 100 km², but they may range as high as 3 000 km². The map contains about 40 000 such cells.

The map is largely produced by computer. First, the cell boundaries are digitized, i.e. they are converted into numbers that are stored in the computer. Also, major geographic and jurisdictional boundaries are digitized. Second, the forest inventory data are stored, by cell, in the computer. The link between cell boundaries and cell data is the cell reference number.

To produce a map, the cell boundaries and the cell data are linked in the computer and transmitted to a plotter, which produces the map. Additional information regarding map legend, classes, and text is also transmitted to the plotter.



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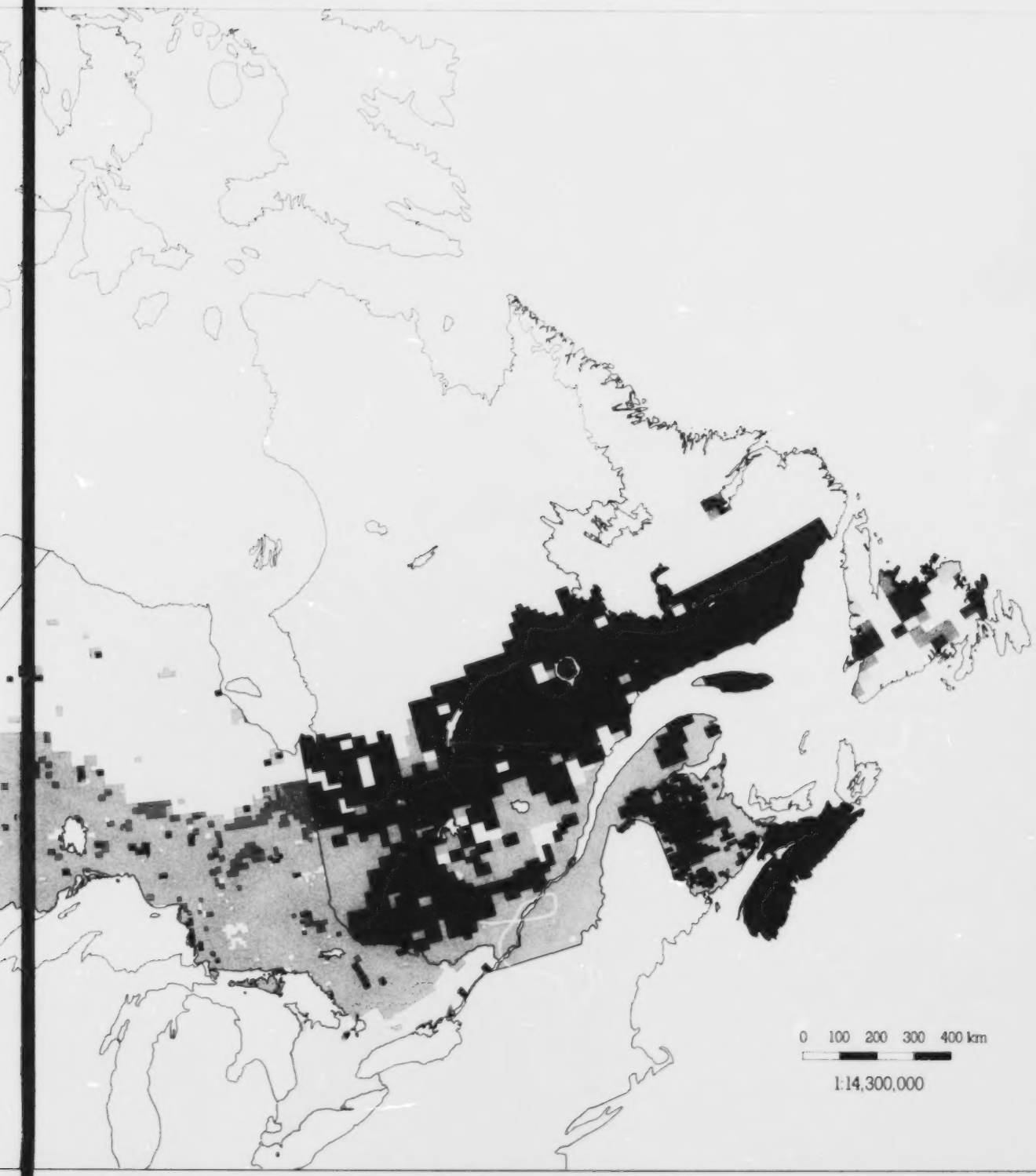
S FOREST RESOURCES
DATA 1981 SUMMARY

RESSOURCES FORESTIÈRES DU CANADA
DONNÉES D'INVENTAIRE SOMMAIRE 1981

AS DISTRIBUTION

Map/Carte 5

RÉPARTITION DES CLASSES D'ÂGE



Carte nº 5
Répartition des classes d'âges

Sur cette carte, l'information fournie par chaque quadrilatère est la classe d'âge des terres forestières boisées et productives. La superficie de chaque classe d'âge est calculée et la classe ayant la plus grande superficie (la classe dominante) est assignée au quadrilatère pour les besoins de la carte. Le quadrilatères dont on ne connaît pas les données sur la classe d'âge sont classés comme étant à prédominance forestière.

Superficie des terres forestières boisées et productives par province et territoire et par classe d'âge

Province ou territoire	Classe d'âge					Total
	Régénération	Immature	À maturité	Surannée	Indéterminée	
	Superficie (1 000 km²)					
Terre-Neuve	0.08	3.69	7.79	4.63	63.60	79.79
Nouvelle-Écosse	0.67	3.58	19.30	5.21	0.00	28.77
Île-du-Prince-Édouard	0.01	0.00	0.00	0.00	2.47	2.48
Nouveau-Brunswick	0.24	25.62	30.98	2.28	0.00	59.12
Québec	69.57	140.81	278.91	0.00	0.00	489.29
Ontario	16.60	238.03	38.11	46.46	0.13	339.33
Manitoba	11.59	86.07	21.56	1.84	0.00	121.06
Saskatchewan	0.15	2.67	1.95	0.01	77.61	82.38
Alberta	19.24	95.72	19.99	7.15	7.79	149.90
Colombie-Britannique	18.99	165.27	233.60	1.84	0.63	420.34
Yukon	19.66	26.25	2.94	0.00	0.49	49.34
Terr. du Nord-Ouest	8.04	89.09	45.64	0.15	0.00	142.93
Total	164.85	876.79	700.78	69.56	152.72	1 964.73

Note: Les totaux peuvent ne pas être exacts, certains chiffres étant arrondis.

Cette carte thématique est produite à partir des données exprimées par des quadrilatères. Ce sont des polygones cartographiques ayant une surface cible de 100 km², mais qui peuvent mesurer jusqu'à 3 000 km². La carte comprend environ 40 000 quadrilatères.

La carte est produite en grande partie par l'ordinateur. D'abord les limites des quadrilatères sont numérisées, c'est-à-dire converties en nombres, et emmagasinées dans l'ordinateur. Les frontières géographiques et politiques sont également numérisées. Ensuite, les données de l'inventaire forestier sont mises en mémoire par quadrilatère. Le lien entre les limites et les données des quadrilatères constitue leur numéro de référence.

Pour produire une carte, les limites et les données des quadrilatères sont liées dans l'ordinateur et transmises à un traceur, lequel dessine la carte. Les informations additionnelles concernant la légende de la carte ainsi que les classes et le texte sont également transmises au traceur.

Site quality measures the capability for timber growth of forest lands. Classification systems often used in Canada for estimating site quality are either numerical and objective (e.g. site index classes) or subjective (good, medium, and poor). The former approach is used in this report; data are converted to and summarized by the following classes:

Site Index Class	Dominant Tree Height at 50 Years
1	5.0– 9.9 m
2	10.0–14.9 m
3	15.0–19.9 m
4	20.0–24.9 m
5	25.0–29.9 m
6	30.0–34.9 m
7	35.0 + m

Thus, the higher the site index class number, the better the site quality.

Available site class data are summarized in Figure 4 (derived from Tables N 7 and N 15, Appendix 3), using a technique similar to Figure 3. Site class 2 has the largest area although classes 3 and 1 are almost as large. The very small areas of the highest classes are to be expected. They occur mostly in British Columbia (Table P 8, Appendix 4).

Figure 4 also shows an expected correlation between site class and average volume; as site quality increases, average volume increases.

The product of area and average volume, indicating total volume, shows that classes 2 and 3 are the largest (at 5.1 and 5.3 billion m^3 respectively).

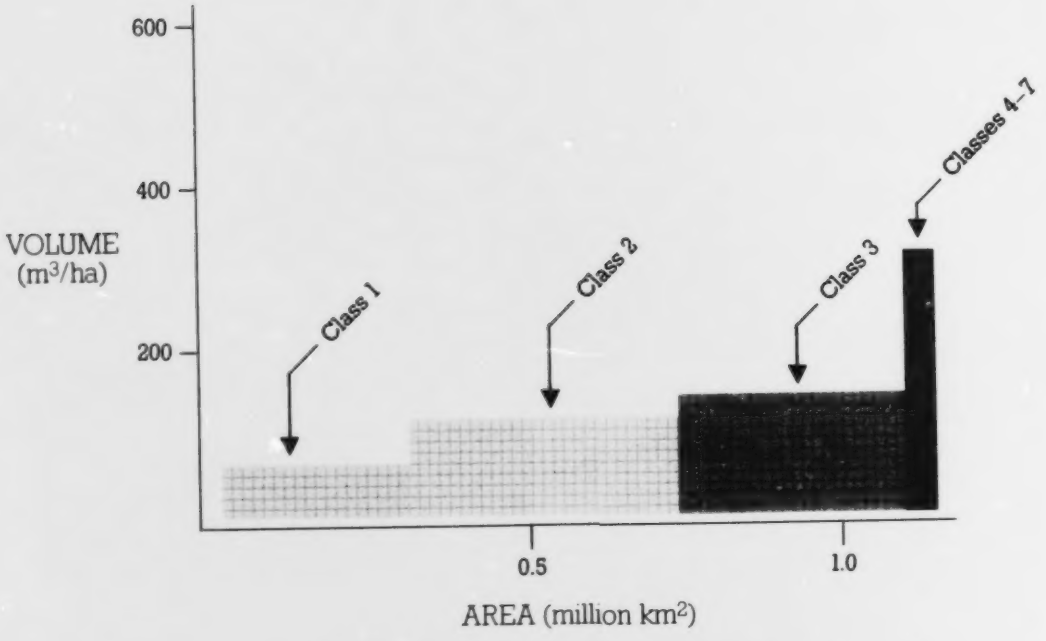


Figure 4. Areas and volumes by site classes.

At present, only 60% of all stocked, productive, nonreserved forest land is classified by site (Table P 8, Appendix 4). Therefore, the totals given are not truly national totals. However, the relationship between the classes can be expected to remain the same on a national basis: classes 2 and 3 will still have the largest areas and volumes, and average volumes will show the same pattern and magnitude.

Forested areas or stands are usually classified according to forest type. Three types are recognized in this report: Softwood, Mixedwood, and Hardwood. They are identified by the proportion of the forest (in terms of crown closure or volume) that is coniferous.

Map no. 6 (Forest Types) shows the distribution across Canada of the three forest types. The hardwoods occur in a band across southern Quebec and Ontario (mostly birch and maple), thinning in southern Manitoba and Saskatchewan but broadening again in Alberta, where aspen/poplar predominates. The mixedwood forests extend in a band north of the hardwoods, through the Maritimes, central Quebec, Ontario, and the Prairies. The softwood forests occur further north again, as well as predominating in British Columbia.

Most provincial and territorial inventories include the forest type classification, hence the coverage on a national basis is almost 100%. The data are summarized in Figure 5 (derived from Tables N 6 and N 11, Appendix 3).

The softwood type is the largest in area (65% of total), volume (71% of total), and average volume (112 m^3/ha). Mixedwood is second in area (23% of total) and volume (18% of total), but third in average volume (82 m^3/ha versus 89 m^3/ha for hardwood).

Table P 10 (Appendix 4) shows the distribution by province and territory. British Columbia has the largest area of softwoods (348 000 km^2), closely followed by Quebec at 323 000 km^2. Quebec and Ontario contain the largest areas of hardwoods. Note that data for southern Ontario are not included; they may add some 8 000 km^2 of hardwoods. Further, data for northern Ontario may add some 15 000 km^2 to the softwood total (Dixon 1963).

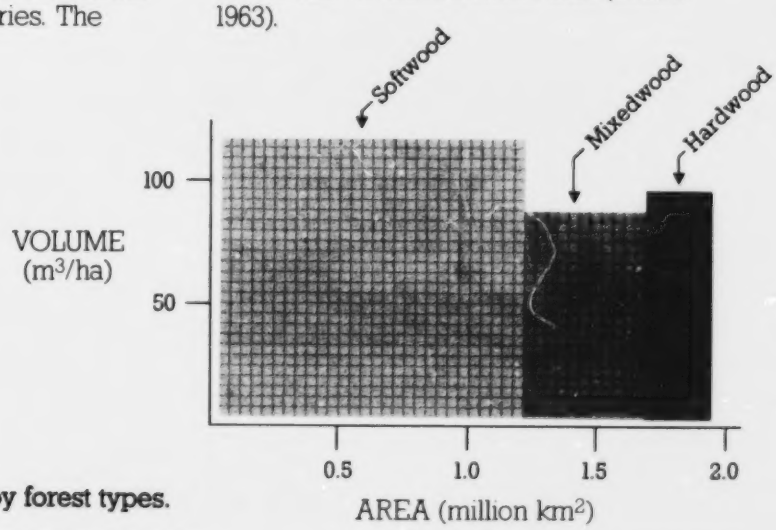


Figure 5. Areas and volumes by forest types.

Map No. 6
Forest Types

The information mapped for each cell is the forest type or species composition (softwood, mixedwood, hardwood). Coniferous volume as a percentage of total wood volume is used to determine the cell class, as indicated on the map legend. Cells that do not have any wood volume data are classified as Predominantly Forest.

Area of Stocked, Productive Forest Land by Province and Territory and Mapped Classes of Forest Types

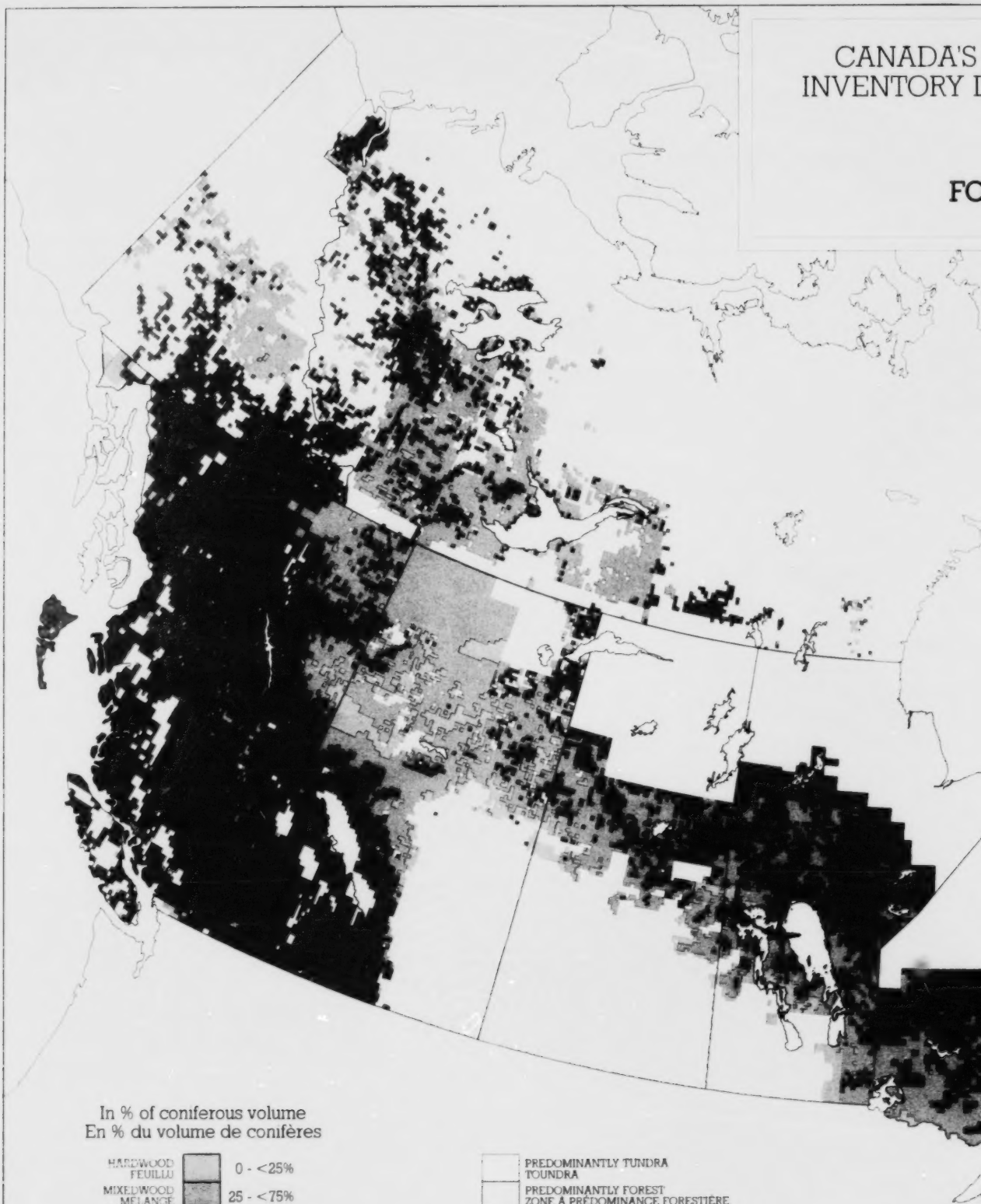
Province or Territory	Forest Type Classes				Total
	Softwood	Mixedwood	Hardwood	Undetermined	
	Area (1 000 km²)				
Newfoundland	73.72	5.20	0.87	0.00	79.79
Nova Scotia	13.98	9.21	5.58	0.00	28.77
Prince Edward Island	0.91	0.86	0.71	0.00	2.48
New Brunswick	22.41	28.29	8.42	0.00	59.12
Quebec	323.25	98.69	62.57	4.77	489.28
Ontario	171.97	109.28	57.95	0.13	339.33
Manitoba	86.28	16.60	18.17	0.00	121.06
Saskatchewan	46.63	14.19	21.55	0.02	82.38
Alberta	76.80	37.91	35.07	0.12	149.90
British Columbia	354.49	33.54	32.30	0.00	420.34
Yukon Territory	48.85	0.00	0.49	0.00	49.34
Northwest Territories	42.25	94.08	6.60	0.00	142.93
Total	1 261.55	447.84	250.27	5.04	1 964.73

Note: Totals may not add due to rounding.

This choropleth map is produced from data summarized by cells. These cells are map polygons having a target size of 100 km², but they may range as high as 3 000 km². The map contains about 40 000 such cells.

The map is largely produced by computer. First, the cell boundaries are digitized, i.e. they are converted into numbers that are stored in the computer. Also, major geographic and jurisdictional boundaries are digitized. Second, the forest inventory data are stored, by cell, in the computer. The link between cell boundaries and cell data is the cell reference number.

To produce a map, the cell boundaries and the cell data are linked in the computer and transmitted to a plotter, which produces the map. Additional information regarding map legend, classes, and text is also transmitted to the plotter.



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BY THE GEOCARTOGRAPHICS SUB-DIVISION, STATISTICS CANADA, 1982

PRÉPARÉ POUR LA DIRECTION DE LA STATISTIQUE FORESTIÈRE ET DES SYSTÈMES, SERVICE CANADIEN DES FORÊTS
PAR LA SOUS-DIVISION GÉOCARTOGRAPHIQUE, STATISTIQUE CANADA, 1982

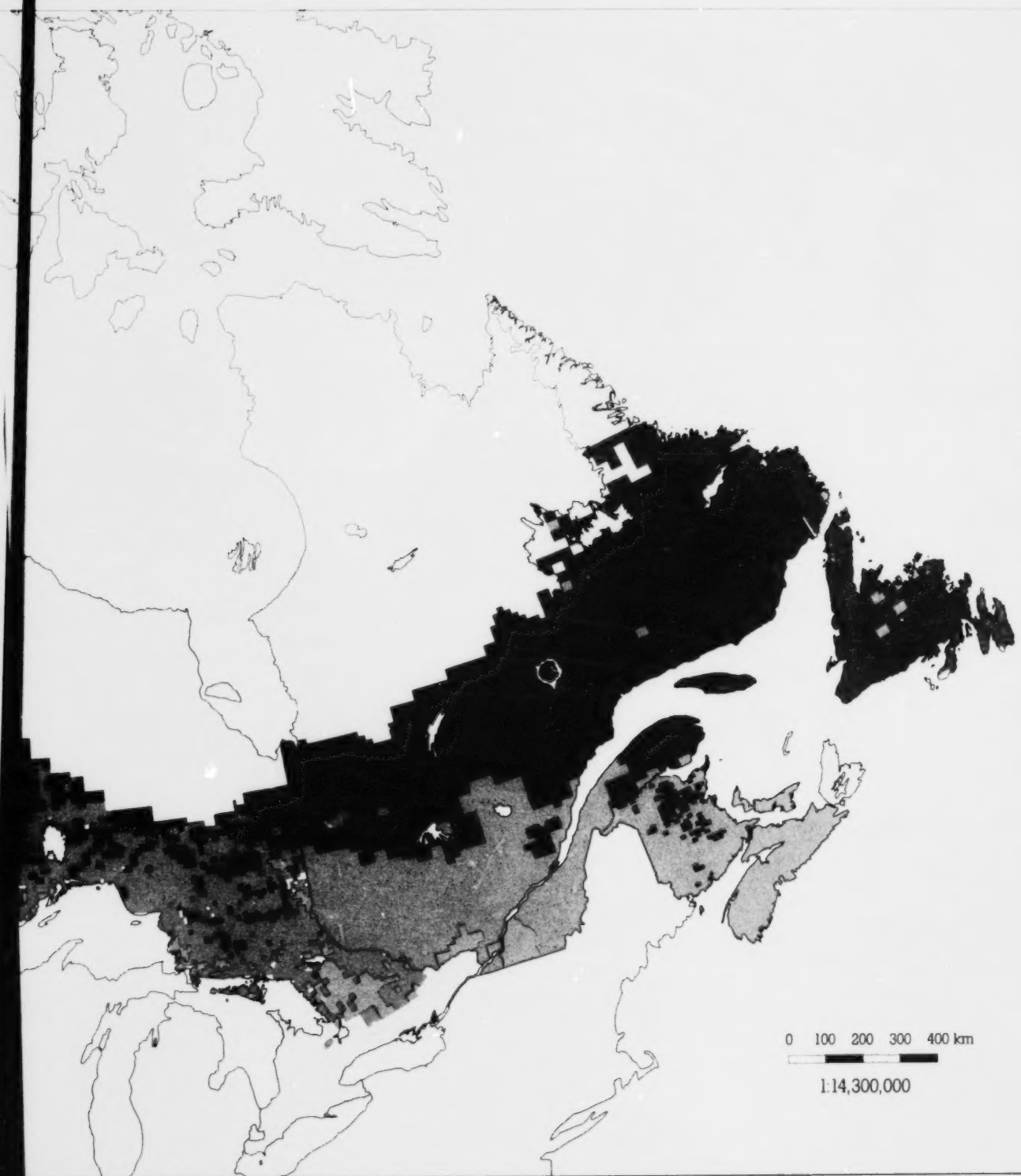
FOREST RESOURCES
DATA 1981 SUMMARY

RESSOURCES FORESTIÈRES DU CANADA
DONNÉES D'INVENTAIRE SOMMAIRE 1981

REST TYPES

Map/Carte 6

TYPES DE COUVERT



Carte nº 6
Types de couvert

Sur cette carte, l'information fournie par chaque quadrilatère est le type de couvert (résineux, mélangé, feuillu) tel qu'indiqué dans la légende de la carte, le volume de résineux exprimé en pourcentage du volume total du bois détermine le type de couvert dans chaque quadrilatère. Les quadrilatères dont on ne connaît pas les données sur le volume de bois sont classés comme étant à prédominance forestière.

Superficie des terres forestières boisées et productives par province et territoire et par type de couvert

Province ou territoire	Type de couvert				Total
	Résineux	Mélangé	Feuillu	Indéterminé	
	Superficie (1 000 km²)				
Terre-Neuve	73.72	5.20	0.87	0.00	79.79
Nouvelle-Écosse	13.98	9.21	5.58	0.00	28.77
Île-du-Prince-Édouard	0.91	0.86	0.71	0.00	2.48
Nouveau-Brunswick	22.41	28.29	8.42	0.00	59.12
Québec	323.25	98.69	62.57	4.77	489.29
Ontario	171.97	109.28	57.95	0.13	339.33
Manitoba	86.28	16.60	18.17	0.00	121.06
Saskatchewan	46.63	14.19	21.55	0.02	82.38
Alberta	76.80	37.91	35.07	0.12	149.90
Colombie-Britannique	354.49	33.54	32.30	0.00	420.34
Yukon	48.85	0.00	0.49	0.00	49.34
Terr. du Nord-Ouest	42.25	94.08	6.60	0.00	142.93
Total	1 261.55	447.84	250.27	5.04	1 964.73

Note: Les totaux peuvent ne pas être exacts, certains chiffres étant arrondis.

Cette carte thématique est produite à partir des données exprimées par des quadrilatères. Ce sont des polygones cartographiques ayant une surface cible de 100 km², mais qui peuvent mesurer jusqu'à 3 000 km². La carte comprend environ 40 000 quadrilatères.

La carte est produite en grande partie par l'ordinateur. D'abord les limites des quadrilatères sont numérisées, c'est-à-dire converties en nombres, et emmagasinées dans l'ordinateur. Les frontières géographiques et politiques sont également numérisées. Ensuite, les données de l'inventaire forestier sont mises en mémoire par quadrilatère. Le lien entre les limites et les données des quadrilatères constitue leur numéro de référence.

Pour produire une carte, les limites et les données des quadrilatères sont liées dans l'ordinateur et transmises à un traceur, lequel dessine la carte. Les informations additionnelles concernant la légende de la carte ainsi que les classes et le texte sont également transmises au traceur.

Volume Distribution

One of the most important types of information is the growing stock or total wood volume and its distribution by species and location. In this report, the 30 commercially important species are combined into seven softwood or coniferous groups, and four hardwood or deciduous groups (*see* Appendix 1 for component species and names). Table 4 (from Appendix 4, Table P 14) gives the percentage distribution of wood volume by these species groups and by region.

The total volume of wood on stocked, productive, nonreserved forest land (the economic forest base) is 19.6 billion m^3 (Table N 10, Appendix 3). Of this volume, spruce is by far the most important conifer and comprises at least 31%. The actual percentage could be as high as 36% because in the Territories and most of Newfoundland, spruce is not identified but is part of "Unspecified Coniferous." Also, the inventoried volume of spruce is greater than that of any other species group in each province and territory. Pine makes up 16% of the volume, followed by fir (excluding Douglas-fir) at 14%. Only then, at 11%, comes the first deciduous species, aspen/poplar.

British Columbia accounts for 40% of the total wood volume, although it only accounts for 22% of the corresponding forest land. On a comparative basis, the 40% is low because British Columbia reports net merchantable volume and the other provinces report gross merchantable volume. It is followed by Quebec (21%) and Ontario (16%).

Table 4. Volumes (in % of total) by species group and region

	Region						
Species Group	Atlantic	Quebec	Ontario	Prairies	B.C.	Territories	Canada
Spruce	1	9	7	4	10	0	31
Pine	–	1	3	3	8	0	16
Fir	1	5	1	–	7	0	14
Hemlock	–	–	–	0	6	0	6
Cedar	–	–	–	–	3	0	4
Douglas-fir	0	0	0	–	3	0	3
Unspecified Coniferous	2	–	–	–	1	3	5
Total Coniferous	4	15	11	8	38	3	79
Aspen/Poplar	–	1	3	5	2	0	11
Birch	–	2	2	–	–	0	5
Maple	1	1	1	–	–	0	3
Unspecified Deciduous	–	–	–	–	–	1	2
Total Deciduous	2	5	6	5	2	1	21
Total	6	20	17	13	40	4	100

– less than 0.5%.

The distribution of wood volumes across Canada is shown in Map No. 7 (Average Wood Volume). The highest volumes per hectare occur in British Columbia where large areas exceed 200 m^3/ha. For a few cells, values range as high as 1 300 m^3/ha. Small scattered areas in Alberta and Ontario also exceed 200 m^3/ha. As expected, the Territories and Labrador are at the other end of the scale.

The ability to map individual species groups using CFRDS is demonstrated in Map No. 8 (Average Volume of Spruce) and Map No. 9 (Average Volume of Aspen/Poplar). The highest concentrations of spruce are found in northern Ontario and the interior of British Columbia, whereas aspen/poplar is concentrated in Alberta. The large areas in the Territories that show zero volume are unproductive forest lands, for which no volumes are given. Also, large areas in the Territories and Newfoundland show as "Undetermined" because the species groups are not identified.

Nonstocked, Productive, Nonreserved Forest Land

This land is also called NSR (not satisfactorily restocked), potentially productive, or the nonstocked backlog of forest land. It has failed to regenerate satisfactorily following harvesting, fire, or some other disturbance. Much of it can be regenerated through expanded silvicultural programs.

Map No. 10 (Area of Nonstocked, Productive Forest Land) shows the distribution of these lands. The strikingly high NSR areas in Alberta must be weighted by reference to Map No. 1 (Age of Inventory), which indicates that much of this information is out-of-date. In British Columbia, the NSR lands are concentrated in the dry northeastern corner. In Ontario and Quebec, they occur mostly in the northern, less accessible and valuable, forests.

Map No. 7
Average Wood Volume

The information mapped for each cell is the average volume of wood, expressed in m^3/ha. Total wood volume in a cell is divided by the number of hectares on which it grows. The values are grouped into four classes and mapped giving each class a color. Cells that do not have any wood volume data are classified as Predominantly Forest.

B.C. reports net merchantable volume; P.E.I. reports gross total volume; all other provinces and territories report gross merchantable volumes.

Area of Stocked, Productive Forest Land by Province and Territory and Mapped Classes of Average Wood Volume

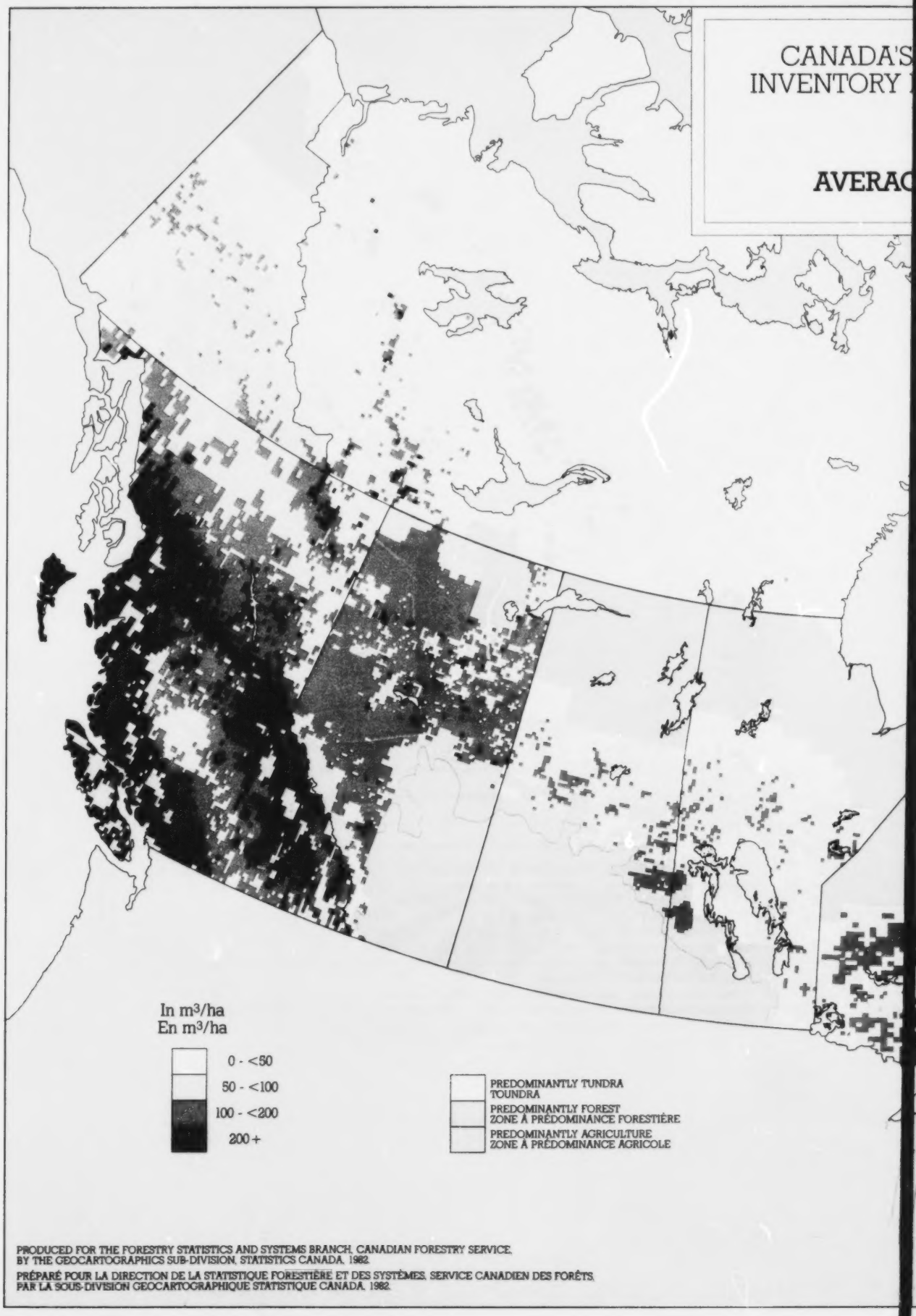
Province or Territory	Average Wood Volume Classes (m^3/ha)						
	0	>0–<50	50–<100	100–<200	200+	Un-determined	Total
	Area (1 000 km^2)						
Newfoundland	0.08	26.31	45.82	3.69	0.00	3.90	79.79
Nova Scotia	0.00	1.20	27.57	0.00	0.00	0.00	28.77
Prince Edward Island	0.01	0.00	0.03	2.45	0.00	0.00	2.48
New Brunswick	0.24	1.55	40.12	16.75	0.00	0.46	59.12
Quebec	0.21	16.76	342.01	130.26	0.00	0.05	489.29
Ontario	7.03	15.62	145.67	163.40	1.05	6.57	339.33
Manitoba	11.59	42.11	53.98	10.83	0.00	2.54	121.06
Saskatchewan	0.15	23.90	41.56	12.08	0.00	4.69	82.38
Alberta	18.79	5.06	14.69	91.34	2.79	17.24	149.90
British Columbia	10.47	13.85	78.50	158.19	147.23	12.08	420.34
Yukon Territory	19.66	0.00	24.60	5.04	0.00	0.04	49.34
Northwest Territories	8.04	105.88	14.39	8.83	1.04	4.75	142.93
Total	76.27	252.23	828.93	602.84	152.12	52.32	1 964.72

Note: Totals may not add due to rounding.

This choropleth map is produced from data summarized by cells. These cells are map polygons having a target size of 100 km^2, but they may range as high as 3 000 km^2. The map contains about 40 000 such cells.

The map is largely produced by computer. First, the cell boundaries are digitized, i.e. they are converted into numbers that are stored in the computer. Also, major geographic and jurisdictional boundaries are digitized. Second, the forest inventory data are stored, by cell, in the computer. The link between cell boundaries and cell data is the cell reference number.

To produce a map, the cell boundaries and the cell data are linked in the computer and transmitted to a plotter, which produces the map. Additional information regarding map legend, classes, and text is also transmitted to the plotter.



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OREST RESOURCES
ATA 1981 SUMMARY

RESSOURCES FORESTIÈRES DU CANADA
DONNÉES D'INVENTAIRE SOMMAIRE 1981

WOOD VOLUME

Map/Carte 7

VOLUME DE BOIS MOYEN

Carte n° 7
Volume de bois moyen

Sur cette carte, l'information fournie par chaque quadrilatère est le volume de bois moyen exprimé en mètres cubes à l'hectare. Le volume total de bois de chaque quadrilatère est divisé par le nombre d'hectares qui le supporte. Les valeurs sont groupées en quatre classes et reproduites en donnant une couleur à chaque classe. Les quadrilatères dont on ne connaît pas les données sur le volume de bois sont classés comme étant à prédominance forestière.

Les données de la Colombie-Britannique représentent le volume marchand net, celles de l'Île-du-Prince-Édouard le volume total brut, et toutes les autres provinces et territoires, le volume marchand brut.

Superficie des terres forestières boisées et productives par province et territoire et par classe de volume de bois moyen

	Classe de volume de bois moyen (m^3/ha)						
Province ou territoire	0	>0–<50	50–<100	100–<200	200+	Indéterminé	**Total**
	Superficie (1000 km^2)						
Terre-Neuve	0.08	26.31	45.82	3.69	0.00	3.90	79.79
Nouvelle-Écosse	0.00	1.20	27.57	0.00	0.00	0.00	28.77
Île-du-Prince-Édouard	0.01	0.00	0.03	2.45	0.00	0.00	2.48
Nouveau-Brunswick	0.24	1.55	40.12	16.75	0.00	0.46	59.12
Québec	0.21	16.76	342.01	130.26	0.00	0.05	489.29
Ontario	7.03	15.62	145.67	163.40	1.05	6.57	339.33
Manitoba	11.59	42.11	53.98	10.83	0.00	2.54	121.06
Saskatchewan	0.15	23.90	41.56	12.08	0.00	4.69	82.38
Alberta	18.79	5.06	14.69	91.34	2.79	17.24	149.90
Colombie-Britannique	10.47	13.85	78.50	158.19	147.23	12.08	420.34
Yukon	19.66	0.00	24.60	5.04	0.00	0.04	49.34
Terr. du Nord-Ouest	8.04	105.88	14.39	8.83	1.04	4.75	142.93
Total	76.27	252.23	828.93	602.84	152.12	52.32	1 964.72

Note: Les totaux peuvent ne pas être exacts, certains chiffres étant arrondis.

Cette carte thématique est produite à partir des données exprimées par des quadrilatères. Ce sont des polygones cartographiques ayant une surface cible de 100 km^2, mais qui peuvent mesurer jusqu'à 3 000 km^2. La carte comprend environ 40 000 quadrilatères.

La carte est produite en grande partie par l'ordinateur. D'abord les limites des quadrilatères sont numérisées, c'est-à-dire converties en nombres, et emmagasinées dans l'ordinateur. Les frontières géographiques et politiques sont également numérisées. Ensuite, les données de l'inventaire forestier sont mises en mémoire par quadrilatère. Le lien entre les limites et les données des quadrilatères constitue leur numéro de référence.

Pour produire une carte, les limites et les données des quadrilatères sont liées dans l'ordinateur et transmises à un traceur, lequel dessine la carte. Les informations additionnelles concernant la légende de la carte ainsi que les classes et le texte sont également transmises au traceur.

Map No. 8
Average Volume of Spruce

The information mapped for each cell is the average volume of spruce, expressed in m^3/ha. Total volume of spruce in a cell is divided by the number of hectares on which it grows. The values are grouped into four classes and mapped giving each class a color. Cells in the Predominantly Forest area that do not have any spruce volume data but do have other species volume data are classified as "zero."

B.C. reports net merchantable volume, P.E.I. reports gross total volume, all other provinces and territories report gross merchantable volumes.

Area of Stocked, Productive Forest Land by Province and Territory and Mapped Classes of Spruce Volume

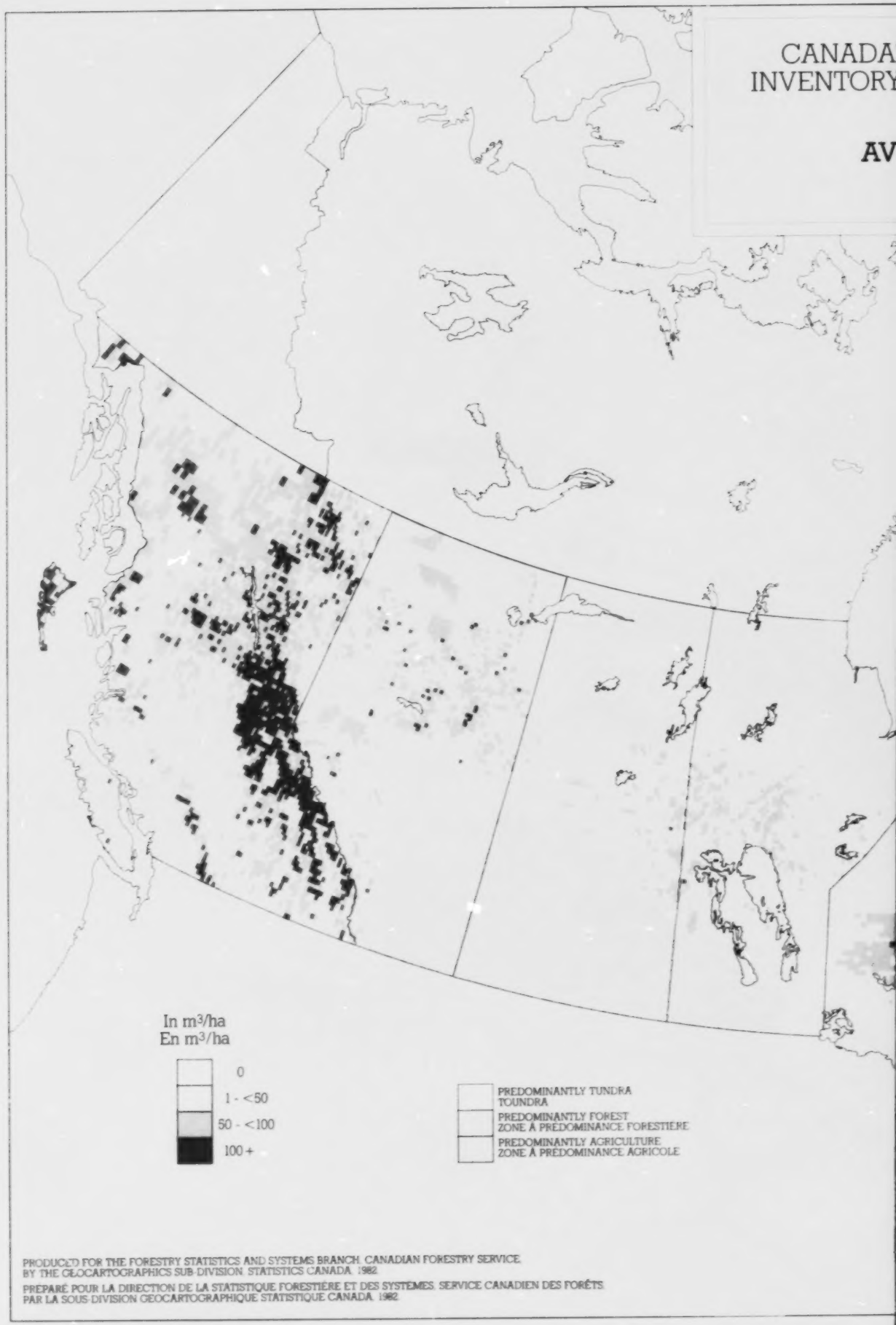
Province or Territory	Spruce Volume Classes (m^3/ha)					
	0	>0-<50	50-<100	100+	Un-determined	Total
	Area (1 000 km^2)					
Newfoundland	0.11	0.06	7.72	4.45	67.46	79.79
Nova Scotia	0.10	1.19	27.47	0.00	0.00	28.77
Prince Edward Island	0.01	0.00	0.03	2.45	0.00	2.48
New Brunswick	0.42	1.44	39.58	17.23	0.46	59.12
Quebec	0.63	16.76	340.94	130.85	0.05	489.29
Ontario	16.85	13.34	134.23	168.34	6.57	339.33
Manitoba	12.13	41.54	53.87	10.97	2.54	121.06
Saskatchewan	0.15	23.88	41.57	12.08	4.69	82.38
Alberta	19.09	4.84	14.57	94.17	17.24	149.90
British Columbia	46.91	6.66	59.97	294.70	12.08	420.34
Yukon Territory	19.66	0.00	0.00	0.00	29.68	49.34
Northwest Territories	8.04	0.00	0.00	0.00	134.89	142.93
Total	124.16	109.70	719.97	735.23	275.66	1 964.72

Note: Totals may not add due to rounding.

This choropleth map is produced from data summarized by cells. These cells are map polygons having a target size of 100 km^2, but they may range as high as 3 000 km^2. The map contains about 40 000 su.[*] cells.

The map is largely produced by computer. First, the cell boundaries are digitized, i.e. they are converted into numbers that are stored in the computer. Also, major geographic and jurisdictional boundaries are digitized. Second, the forest inventory data are stored, by cell, in the computer. The link between cell boundaries and cell data is the cell reference number.

To produce a map, the cell boundaries and the cell data are linked in the computer and transmitted to a plotter, which produces the map. Additional information regarding map legend, classes, and text is also transmitted to the plotter.



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FOREST RESOURCES
DATA 1981 SUMMARY

RESSOURCES FORESTIÈRES DU CANADA
DONNÉES D'INVENTAIRE SOMMAIRE 1981

RAGE VOLUME OF SPRUCE

Map/Carte 8

VOLUME MOYEN DE L'ÉPINETTE

Carte n° 8
Volume moyen de l'épinette

Sur cette carte, l'information fournie par chaque quadrilatère est le volume moyen de l'épinette, exprimé en mètres cubes à l'hectare. Le volume total de l'épinette de chaque quadrilatère est divisé par le nombre d'hectares qui le supporte; les valeurs sont groupées en quatre classes et reproduites en donnant une couleur à chaque classe. Les quadrilatères situés dans les superficies à prédominance forestière qui n'ont pas de données sur le volume d'épinette, mais qui en ont sur le volume des autres essences, sont inscrits dans la classe "zéro".

Les données de la Colombie-Britannique représentent le volume marchand net, celles de l'Île-du-Prince-Édouard le volume total brut, et toutes les autres provinces et territoires, le volume marchand brut.

Superficie des terres forestières boisées et productives par province et territoire et par classe de volume d'épinette

Province ou territoire	Classe de volume d'épinette (m^3/ha)					Total
	0	>0-<50	50-<100	100+	Indéterminé	
	Superficie (1 000 km^2)					
Terre-Neuve	0.11	0.06	7.72	4.45	67.46	79.79
Nouvelle-Écosse	0.10	1.19	27.47	0.00	0.00	28.77
Île-du-Prince-Édouard	0.01	0.00	0.03	2.45	0.00	2.48
Nouveau-Brunswick	0.42	1.44	39.58	17.23	0.46	59.12
Québec	0.69	16.76	340.94	130.65	0.05	489.29
Ontario	16.85	13.34	134.23	168.34	6.57	339.33
Manitoba	12.13	41.54	53.67	10.97	2.54	121.06
Saskatchewan	0.15	23.88	41.57	12.08	4.69	82.36
Alberta	19.09	4.84	14.57	94.17	17.24	149.90
Colombie-Britannique	46.91	6.66	59.97	294.70	12.08	420.34
Yukon	19.66	0.00	0.00	0.00	29.68	49.34
Terr. du Nord-Ouest	8.04	0.00	0.00	0.00	134.89	142.93
Total	124.16	109.70	719.97	735.23	275.66	1 964.72

Note: Les totaux peuvent ne pas être exacts, certains chiffres étant arrondis.

Cette carte thématique est produite à partir des données exprimées par des quadrilatères. Ce sont des polygones cartographiques ayant une surface cible de 100 km^2, mais qui peuvent mesurer jusqu'à 3 000 km^2. La carte comprend environ 40 000 quadrilatères.

La carte est produite en grande partie par l'ordinateur. D'abord les limites des quadrilatères sont numérisées, c'est-à-dire converties en nombres, et emmagasinées dans l'ordinateur. Les frontières géographiques et politiques sont également numérisées. Ensuite, les données de l'inventaire forestier sont mises en mémoire par quadrilatère. Le lien entre les limites et les données des quadrilatères constitue leur numéro de référence.

Pour produire une carte, les limites et les données des quadrilatères sont liées dans l'ordinateur et transmises à un traceur, lequel dessine la carte. Les informations additionnelles concernant la légende de la carte ainsi que les classes et le texte sont également transmises au traceur.

Map No. 9
Average Volume of Aspen/Poplar

The information mapped for each cell is the average volume of aspen/poplar expressed in m^3/ha. Total volume of aspen/poplar in a cell is divided by the number of hectares on which it grows. The values are grouped into four classes and mapped giving each class a color. Cells in the Predominantly Forest area that do not have any aspen/poplar volume data but do have other species volume data are classified as "zero".

B.C. reports net merchantable volume; P.E.I. reports gross total volume; all other provinces and territories report gross merchantable volumes.

Area of Stocked, Productive Forest Land by Province and Territory and Mapped Classes of Aspen/Poplar Volume

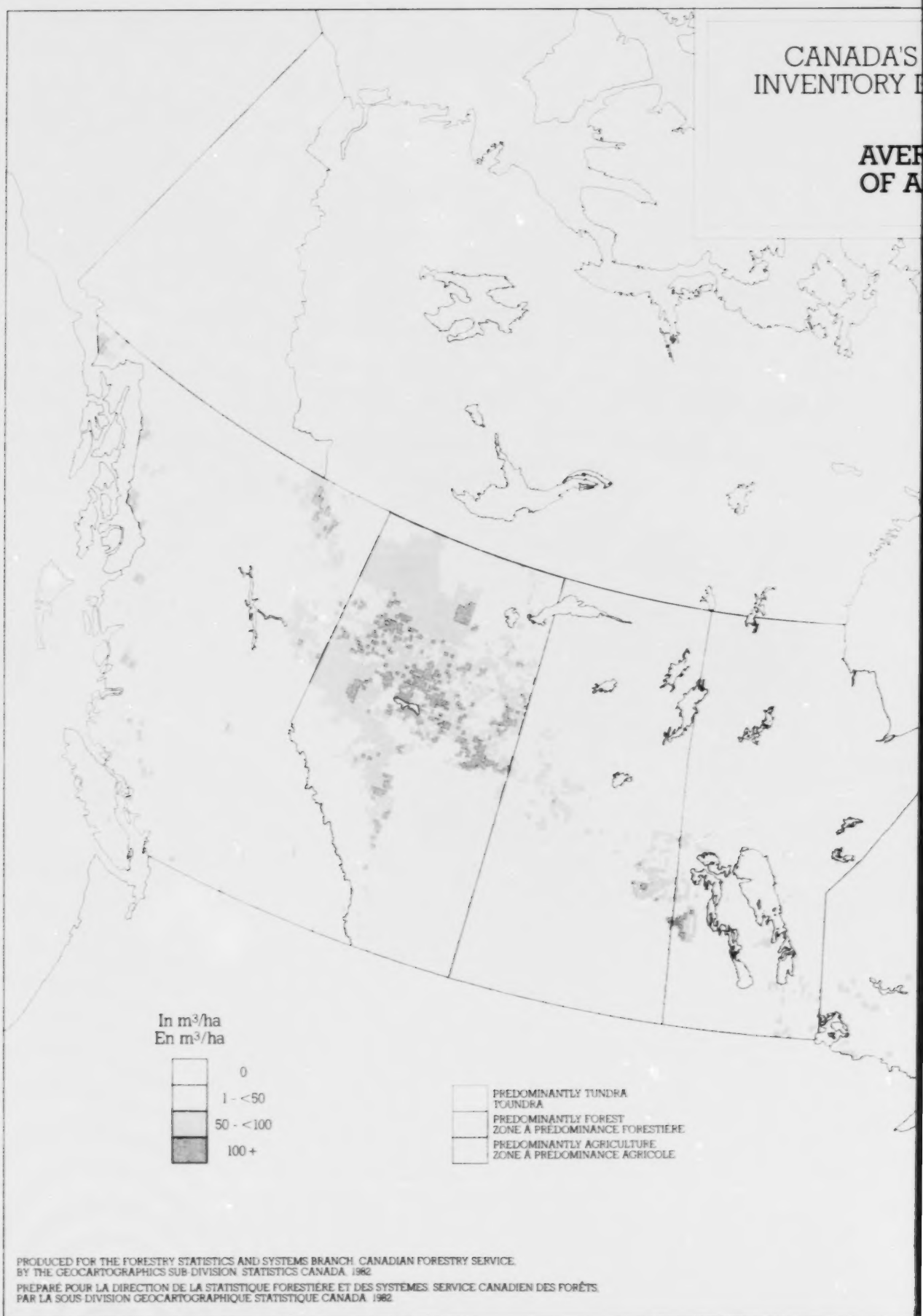
Province or Territory	Aspen/Poplar Volume Classes (m^3/ha)					Total
	0	>0-<50	50-<100	100 +	Un-determined	
	Area ('000 km^2)					
Newfoundland	3.31	0.05	6.04	2.93	67.46	79.79
Nova Scotia	5.04	0.31	22.01	1.41	0.00	28.77
Prince Edward Island	0.01	0.00	0.03	2.45	0.00	2.48
New Brunswick	0.77	1.44	39.09	17.37	0.46	59.12
Quebec	33.06	16.70	305.85	133.63	0.05	489.29
Ontario	38.84	9.69	115.01	169.22	6.57	339.33
Manitoba	13.04	40.68	53.93	10.87	2.54	121.06
Saskatchewan	0.15	23.90	41.56	12.08	4.69	82.38
Alberta	19.08	4.75	14.74	94.19	17.24	149.90
British Columbia	106.90	6.10	41.87	253.31	12.08	420.34
Yukon Territory	19.66	0.00	0.00	0.00	29.68	49.34
Northwest Territories	8.04	0.00	0.00	0.00	134.89	142.93
Total	247.90	103.63	640.12	687.45	275.66	1 964.72

Note: Totals may not add due to rounding.

This choropleth map is produced from data summarized by cells. These cells are map polygons having a target size of 100 km^2, but they may range as high as 3 000 km^2. The map contains about 40 000 such cells.

The map is largely produced by computer. First, the cell boundaries are digitized, i.e. they are converted into numbers that are stored in the computer. Also, major geographic and jurisdictional boundaries are digitized. Second, the forest inventory data are stored, by cell, in the computer. The link between cell boundaries and cell data is the cell reference number.

To produce a map, the cell boundaries and the cell data are linked in the computer and transmitted to a plotter, which produces the map. Additional information regarding map legend, classes, and text is also transmitted to the plotter.



PRODUCED FOR THE FORESTRY STATISTICS AND SYSTEMS BRANCH, CANADIAN FORESTRY SERVICE,
BY THE GEOCARTOGRAPHICS SUB-DIVISION, STATISTICS CANADA, 1982.

PREPARÉ POUR LA DIRECTION DE LA STATISTIQUE FORESTIÈRE ET DES SYSTÈMES, SERVICE CANADIEN DES FORÊTS,
PAR LA SOUS-DIVISION GÉOCARTOGRAPHIQUE, STATISTIQUE CANADA, 1982.

OREST RESOURCES
ATA 1981 SUMMARY

RESSOURCES FORESTIÈRES DU CANADA
DONNÉES D'INVENTAIRE SOMMAIRE 1981

AGE VOLUME
PEN/POPLAR

Map/Carte 9

VOLUME MOYEN
DU PEUPLIER

Carte nº 9
Volume moyen du peuplier

Sur cette carte, l'information fournie par chaque quadrilatère est le volume moyen du peuplier exprimé en mètres cubes à l'hectare. Le volume total du peuplier dans chaque quadrilatère est divisé par le nombre d'hectares qui le supporte. Les valeurs sont groupées en quatre classes et sont reproduites en donnant une couleur à chaque classe. Les quadrilatères situés dans des superficies à prédominance forestière qui n'ont pas de données sur le volume de peuplier, mais qui en ont sur le volume des autres essences, sont inscrits dans la classe "zéro".

Les données de la Colombie-Britannique représentent le volume marchand net, celles de l'Île-du-Prince-Édouard le volume total brut, et toutes les autres provinces et territoires, le volume marchand brut.

Superficie des terres forestières boisées et productives par province et territoire et par classe de volume de peuplier

	Classe de volume de peuplier (m^3/ha)					
Province ou territoire	0	>0–<50	50–<100	100 +	Indéterminé	**Total**
	Superficie (1 000 km^2)					
Terre-Neuve	3.31	0.05	6.04	2.93	67.46	79.79
Nouvelle-Écosse	5.04	0.31	22.01	1.41	0.00	28.77
Île-du-Prince-Édouard	0.01	0.00	0.03	2.45	0.00	2.48
Nouveau-Brunswick	0.77	1.44	39.09	17.37	0.46	59.12
Québec	33.06	16.70	305.85	133.63	0.05	489.29
Ontario	38.84	9.69	115.01	169.22	6.57	339.33
Manitoba	13.04	40.68	53.93	10.87	2.54	121.06
Saskatchewan	0.15	23.90	41.56	12.08	4.69	82.38
Alberta	19.08	4.75	14.74	94.19	17.24	149.90
Colombie-Britannique	106.90	6.10	41.87	253.31	12.08	420.34
Yukon	19.66	0.00	0.00	0.00	29.68	49.34
Terr. du Nord-Ouest	8.04	0.00	0.00	0.00	134.89	142.93
Total	247.90	103.63	640.12	697.45	275.66	1 964.72

Note: Les totaux peuvent ne pas être exacts, certains chiffres étant arrondis.

Cette carte thématique est produite à partir des données exprimées par des quadrilatères. Ce sont des polygones cartographiques ayant une surface cible de 100 km^2, mais qui peuvent mesurer jusqu'à 3 000 km^2. La carte comprend environ 40 000 quadrilatères.

La carte est produite en grande partie par l'ordinateur. D'abord les limites des quadrilatères sont numérisées, c'est-à-dire converties en nombres, et emmagasinées dans l'ordinateur. Les frontières géographiques et politiques sont également numérisées. Ensuite, les données de l'inventaire forestier sont mises en mémoire par quadrilatère. Le lien entre les limites et les données des quadrilatères constitue leur numéro de référence.

Pour produire une carte, les limites et les données des quadrilatères sont liées dans l'ordinateur et transmises à un traceur, lequel dessine la carte. Les informations additionnelles concernant la légende de la carte ainsi que les classes et le texte sont également transmises au traceur.

Map No. 10
Area of Nonstocked, Productive Forest Land

The information mapped for each cell is the area of nonstocked, productive forest land, expressed as a percentage of total cell area. The percentages are calculated for each cell, grouped into five classes, and mapped giving each class a color. Cells that do not have any data on nonstocked, productive forest land are classified as Predominantly Forest.

For the Northwest Territories, areas of undetermined productivity are included with productive area.

Area of Nonstocked, Productive Forest Land by Province and Territory and Mapped Classes of Nonstocked, Productive Forest Land

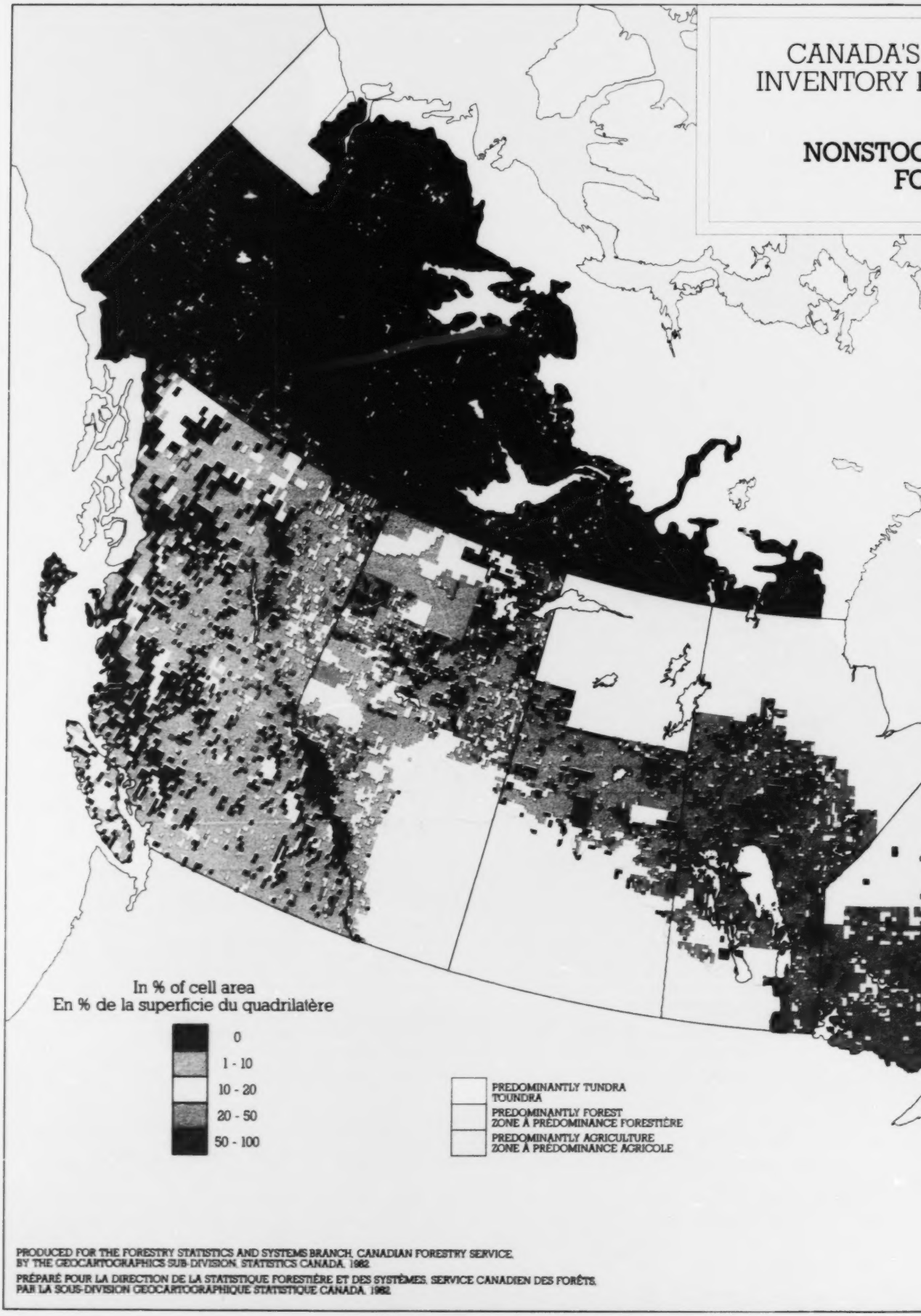
Province or Territory	Nonstocked, Productive Forest Land Area (% of Total Cell Area)				Total
	>0–<10	10–<20	20–<50	50–100	
	Area (1 000 km²)				
Newfoundland	2.58	1.21	0.96	0.00	4.76
Nova Scotia	0.45	0.00	0.00	0.00	0.45
Prince Edward Island	0.24	0.12	0.01	0.00	0.37
New Brunswick	2.02	0.54	0.25	0.06	2.88
Quebec	18.27	12.65	11.90	1.22	44.05
Ontario	10.73	10.10	14.18	2.64	37.65
Manitoba	5.59	4.04	7.16	1.52	18.31
Saskatchewan	1.96	1.00	2.46	1.35	6.76
Alberta	9.96	16.31	24.23	15.53	66.01
British Columbia	12.20	7.38	8.40	1.97	29.94
Yukon Territory	0.95	1.35	5.51	10.18	17.99
Northwest Territories	1.70	2.74	8.92	14.66	28.02
Total	66.66	57.44	83.98	49.13	257.19

Note: Totals may not add due to rounding.

This choropleth map is produced from data summarized by cells. These cells are map polygons having a target size of 100 km², but they may range as high as 3 000 km². The map contains about 40 000 such cells.

The map is largely produced by computer. First, the cell boundaries are digitized, i.e. they are converted into numbers that are stored in the computer. Also, major geographic and jurisdictional boundaries are digitized. Second, the forest inventory data are stored, by cell, in the computer. The link between cell boundaries and cell data is the cell reference number.

To produce a map, the cell boundaries and the cell data are linked in the computer and transmitted to a plotter, which produces the map. Additional information regarding map legend, classes, and text is also transmitted to the plotter.



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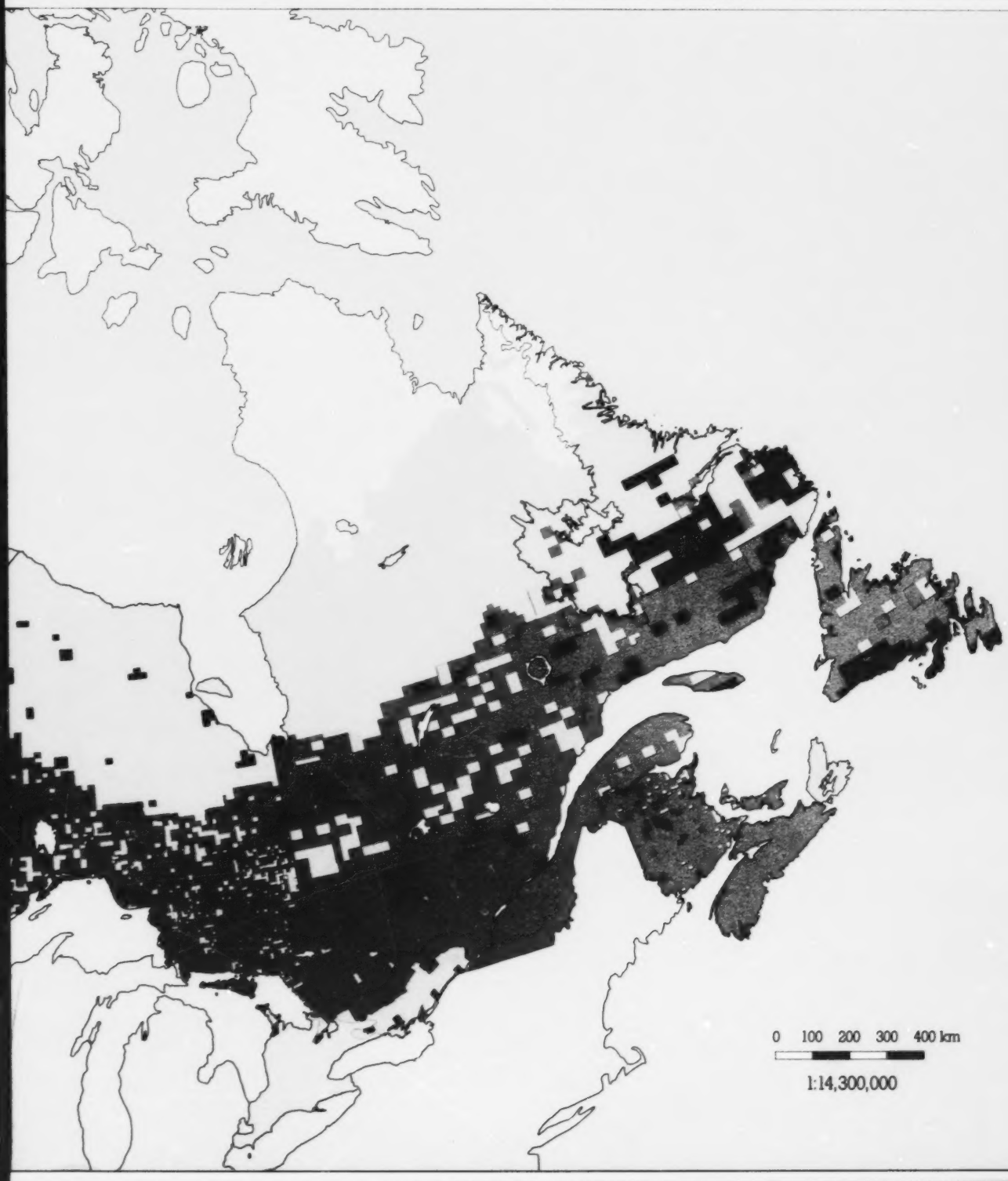
OREST RESOURCES
ATA 1981 SUMMARY

REA OF
ED, PRODUCTIVE
EST LAND

Map/Carte 10

RESSOURCES FORESTIÈRES DU CANADA
DONNÉES D'INVENTAIRE SOMMAIRE 1981

SUPERFICIE DES
TERRES FORESTIÈRES
NON BOISÉES ET PRODUCTIVES



Carte nº 10
Superficie des terres forestières non boisées et productives

Sur cette carte, l'information fournie par chaque quadrilatère est la superficie des terres forestières non boisées et productives, exprimée en pourcentage de la superficie totale du quadrilatère. Les pourcentages sont calculés pour chaque quadrilatère, groupés en cinq classes et reproduits en donnant une couleur à chaque classe. Les quadrilatères qui n'ont pas de données concernant les terres forestières non boisées et productives sont classés comme étant à prédominance forestière.

Pour les Territoires du Nord-Ouest, les superficies dont la productivité est indéterminée sont incluses.

Superficie des terres forestières non boisées et productives par province et territoire et par classe de terres forestières non boisées et productives

	Superficie des terres forestières non boisées et productives (En % de la superficie totale du quadrilatère)				
Province ou territoire	>0–<10	10–<20	20–<50	50–100	**Total**
	Superficie (1 000 km²)				
Terre-Neuve	2.58	1.21	0.96	0.00	4.76
Nouvelle-Écosse	0.45	0.00	0.00	0.00	0.45
Île-du-Prince-Édouard	0.24	0.12	0.01	0.00	0.37
Nouveau-Brunswick	2.02	0.54	0.25	0.06	2.88
Québec	18.27	12.65	11.90	1.22	44.05
Ontario	10.73	10.10	14.18	2.64	37.65
Manitoba	5.59	4.04	7.16	1.52	18.31
Saskatchewan	1.96	1.00	2.46	1.35	6.76
Alberta	9.96	16.31	24.23	15.53	66.01
Colombie-Britannique	12.20	7.38	8.40	1.97	29.94
Yukon	0.95	1.35	5.51	10.18	17.99
Terr. du Nord-Ouest	1.70	2.74	8.92	14.66	28.02
Total	66.66	57.44	83.98	49.13	257.19

Note: Les totaux peuvent ne pas être exacts, certains chiffres étant arrondis.

Cette carte thématique est produite à partir des données exprimées par des quadrilatères. Ce sont des polygones cartographiques ayant une surface cible de 100 km², mais qui peuvent mesurer jusqu'à 3 000 km². La carte comprend environ 40 000 quadrilatères.

La carte est produite en grande partie par l'ordinateur. D'abord les limites des quadrilatères sont numérisées, c'est-à-dire converties en nombres, et emmagasinées dans l'ordinateur. Les frontières géographiques et politiques sont également numérisées. Ensuite, les données de l'inventaire forestier sont mises en mémoire par quadrilatère. Le lien entre les limites et les données des quadrilatères constitue leur numéro de référence.

Pour produire une carte, les limites et les données des quadrilatères sont liées dans l'ordinateur et transmises à un traceur, lequel dessine la carte. Les informations additionnelles concernant la légende de la carte ainsi que les classes et le texte sont également transmises au traceur.

Figure 6 summarizes in graphic form the more significant aspects of these nonstocked areas. The first bar shows that the information for one-quarter of the area (60 000 km^2, Table N 18, Appendix 3) is more than 20 years old and therefore not very reliable. The second bar gives area by ownership; the proportions shown are similar to those for stocked land. The last two bars, area by cause of disturbance and by site quality, are significant because of the large proportions for which data are not available (54 and 56% respectively). Table N 16 (Appendix 3) further shows that less than 1% of nonstocked areas are classified by both cause of disturbance and site quality.

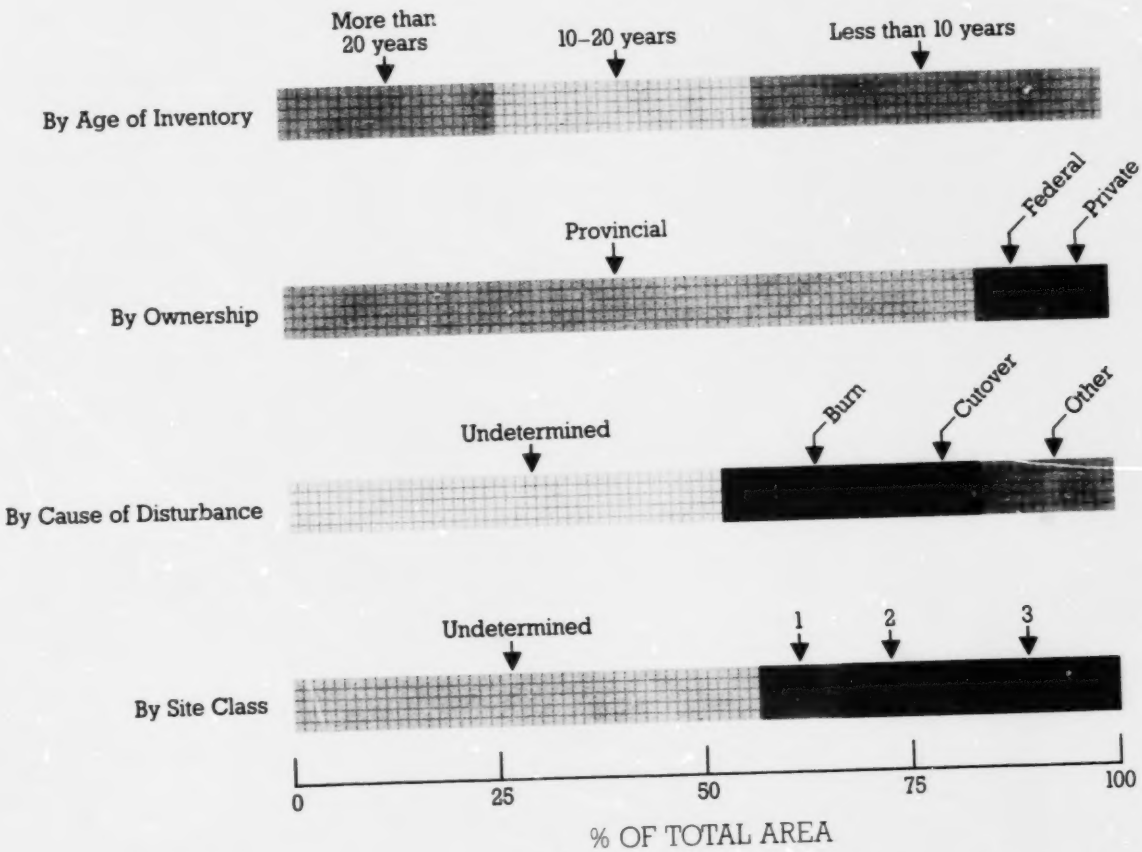


Figure 6. Classification of nonstocked, productive, nonreserved forest land.

Chapter 3
Discussion and conclusions

Statistical data must serve a purpose. The forest inventory data produced and reported in this document constitutes a national stocktaking: how much do we have, how good is it, and where is it? They serve primarily as baseline data, as a foundation for further studies and analyses such as general assessments of provincial, territorial, or national figures; comparative studies at various levels, including the international level; evaluations of specific attributes to identify problem areas or opportunities that require new management or policy plans. These are but a few examples. In addition, some data are of immediate interest; for example, 2% of the productive forest land is reserved (no harvesting is allowed) and 10% is nonstocked (no harvesting is possible).

Comparisons

The reported inventory data have been checked and verified by the provinces and territories. Differences can be expected between these and other published summaries. Such differences may result from changes in methodology and classification, reporting of more recent data, or more complete coverage of inventory. Therefore, comparisons with other inventory summaries, without detailed background knowledge, is not meaningful. Furthermore, assessment of real changes by this means is impossible.

To illustrate these points, two comparisons are made. In the first one, figures from the "Inventoried" columns of Table 1 are compared with the 1976 inventory summary by Bowen (1978).

For inventoried forest land, the area figures are almost identical (3.424 versus 3.417 million km^2.). This is fortuitous because there is considerable variation for individual provinces and territories; general decreases in provincial figures, as a result of more accurate estimates, are balanced by an increase for the Northwest Territories which has finally been surveyed in its entirety.

Although an exact comparison of inventoried, productive forest land is not possible, it appears that the 1981 figures are higher (2.200 versus about 2.080 million km^2). This difference primarily results from much larger areas inventoried and reported for Quebec and the Northwest Territories, whereas Ontario and British Columbia report smaller areas, likely due to more accurate data as well as effects of the classification conversion.

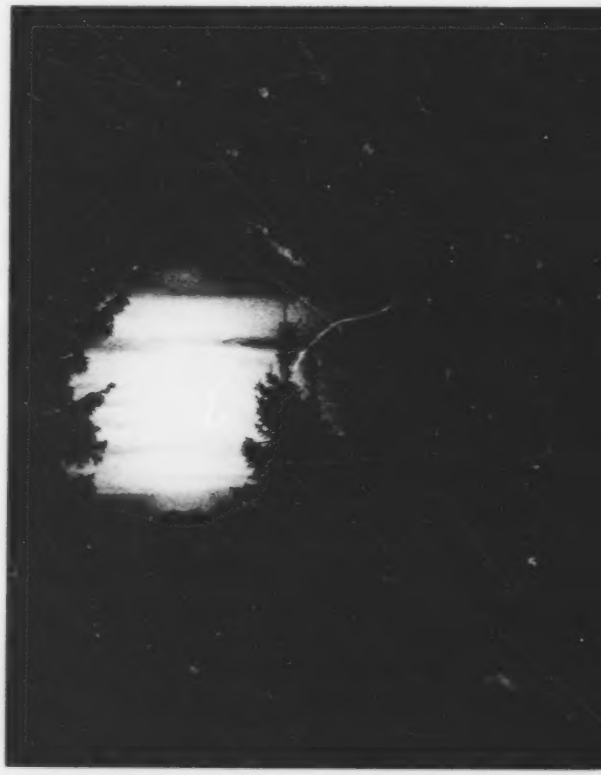
Although the volume figures in Table 1 and Bowen (1978) are close (19 921 versus 19 700 billion m^3), this coincidence again is fortuitous. Many changes have taken place:

- Newfoundland and Ontario report considerably lower figures. The reduction is likely more apparent than real, resulting from more accurate estimates and, for Ontario, a change from gross total volume to gross merchantable volume.
- New Brunswick also reports lower figures; some of the reduction is likely to be real, whereas some can be attributed to a change from gross total to gross merchantable volume.
- Quebec, Manitoba, and the Northwest Territories report higher volumes because of larger areas being inventoried and reported and, for Manitoba, use of more accurate volume equations.
- British Columbia reports a somewhat higher figure (7 945 versus 7 571 million m^3). For a valid comparison, the "noninventoried" figure of 1 786 million m^3 (Table 1) should be added, to make the comparison 9 731 versus 7 571 million m^3. This increase is mostly a result of inclusion in this report of volumes of immature stands.

The second comparison concerns the area of nonstocked, productive, nonreserved forest land. The total area reported here is 227 000 km^2 (Table N 16, Appendix 3). This figure is slightly smaller than the 240 000 km^2 previously reported (Bowen 1978), but it may not represent any real, significant decrease. An examination of the data on a provincial and territorial basis reveals several causes that mask any real change:

- definitions used in the two reports differ;
- provincial definitions have changed;
- in Nova Scotia, no recent Cape Breton inventory data are available;
- in the Northwest Territories, some 28 000 km^2 of nonstocked forest land is excluded because the productivity of the land is undetermined.

These evaluations show very clearly that many factors affect the totals reported, to the extent that any real changes are masked. As an additional example, it was indicated (Anon. 1979) that total depletion (as a result of harvesting, fire, pests, and other causes) was 232 million m^3. Compare this with the reporting here, for the first time, of about 1 600 million m^3 of immature forest volume in British Columbia!



Accuracy of Data

How accurate are the figures; how close are they to the true (but unknown) values? To answer this question for the nationwide volume figures, information on sampling errors of provincial and territorial inventories was obtained, estimates of nonsampling errors were made, and a number of assumptions were postulated. The results are as follows:

(1) Total wood volume of Canada (22.9 billion m^3)—The estimated accuracy is ± 6%; the true volume is in the 21.5–24.3 billion m^3 range;
(2) Wood volume of inventoried area (19.8 billion m^3)—The estimated accuracy is ± 4%; the true volume is in the 19.0–20.6 billion m^3 range;
(3) Wood volume of provincial inventories (19.1 billion m^3)—The estimated accuracy is ± 2%; the true volume is in the 18.7–19.5 billion m^3 range.

These figures represent an educated guess, a best estimate considering the information available.

Conclusions

Forest inventories in Canada have come a long way since the first significant step was taken in the 1950s to obtain nationwide data. The improvements include more complete coverage, more detail, and better statistical control. They result from better provincial and territorial inventories, and the improved methodology used to summarize the data on a nationwide basis. They are dictated by the more intensive use of the forest resources; as the depletion increases to equal the growth or accrual, the intensive use of the resources will turn to intensive management. The challenge is to meet the increased demand for better data that such intensive forest management requires. The Canadian Forestry Service is dedicated to assisting the provinces and territories in providing such data for management purposes, and to providing national summaries for planning and policy-making purposes.

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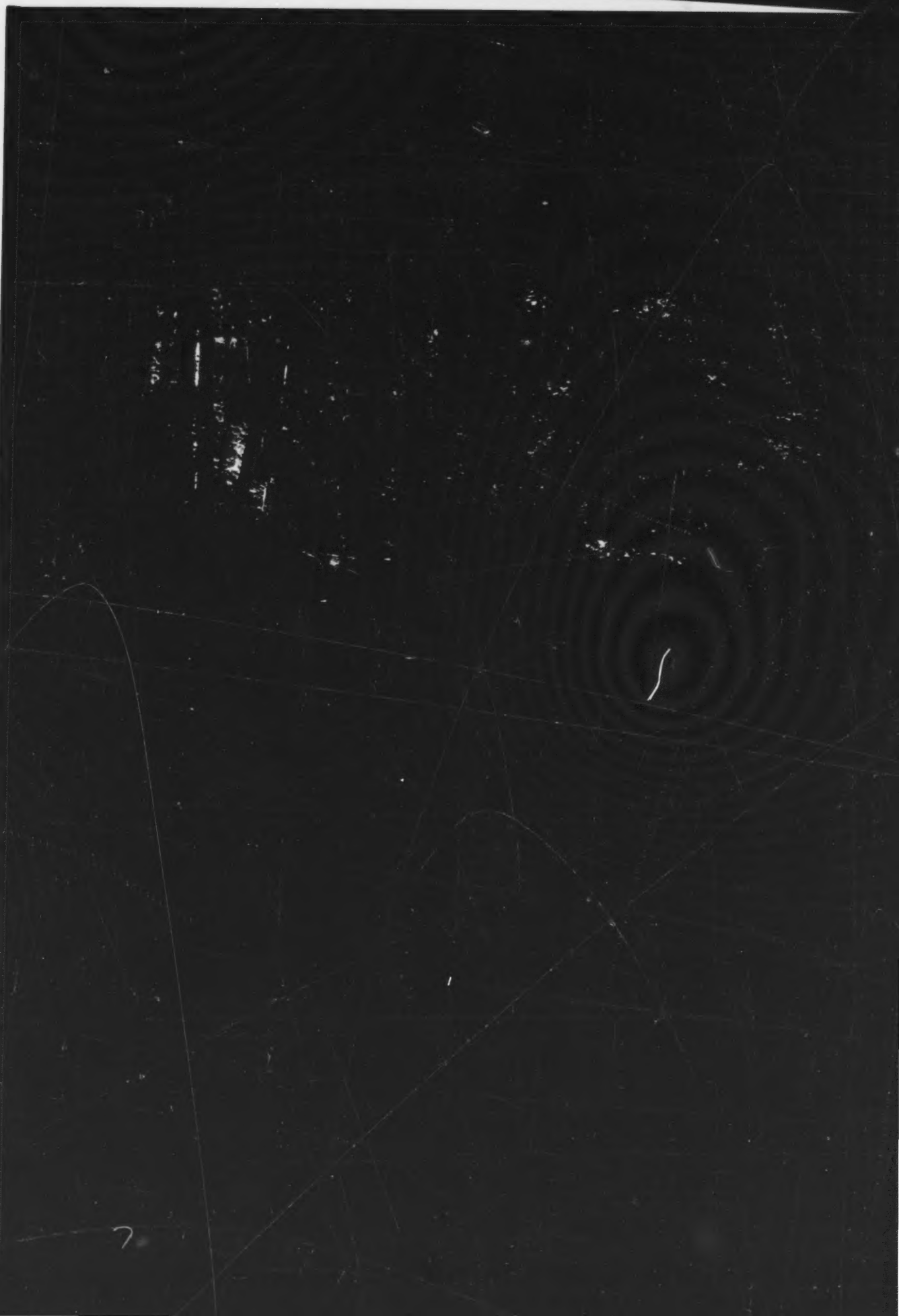


Appendix 1
CFRDS Methodology

The Canadian Forest Resource Data System (CFRDS) is a computer-based system for the input, manipulation, and output of forest resource data. This appendix describes the methodology of CFRDS as applied to the accumulation of nationwide forest inventory data.

The basic data received from the provinces and territories are summarized by "cells" or areas having a target size of 100 km^2. These cells are used by the provinces and territories for summary purposes. Across Canada, over 39 000 cells are used to store the inventory data (Table A 1).

Data Input

For each cell, the inventory data are listed in records. Each record has the following information:

(1) Reference data: Coded records indicating the province or territory and the reference number of the cell.

Table A 1. Statistics on cells used to summarize inventory data

Province or Territory	No. of Cells	Area Covered	Average Cell Size	Type of Cell
		(1 000 km^2)	(km^2)	
Newfoundland	490	359	733	mapsheet combination
Prince Edward Island	100	6	58	100 km^2 UTM cell
Nova Scotia	24	55	2 309	municipality
New Brunswick	686	73	107	mapsheet
Quebec	743	733	986	mapsheet combination
Ontario	3 395	524	154	mapsheet and township
Manitoba	3 599	333	92	township
Saskatchewan	2 036	161	79	township
Alberta	5 157	462	90	township
British Columbia	6 679	839	126	mapsheet and combination
Yukon Territory	5 160	483	94	100 km^2 UTM cell
Northwest Territories	11 429	1 093	96	100 km^2 UTM cell
Canada	39 498	5 121	130	

(2) Classification data: Coded records indicating the unique combinations of classes for which data are available.

Because provincial classification systems differ, a national classification system has been developed (Figure A 1) and relationships with provincial systems have been established (Appendix 1 A). In some cases, provincial classes match the national classes; forest types is a good example. In other cases, a match can be developed; for instance, New Brunswick does not have age classes but has a combination of cutting classes and maturity classes that can be used to approximate age classes. In a few cases, information (e.g., on site quality) is totally lacking and classification cannot be carried out. Definitions of terms used in the national classification system are given in Appendix 1 B.

(3) Attribute data: The year in which the information is obtained (age of inventory), the area (in km^2) having the specified combination of classes, and the volume of wood (in m^3/km^2) for each of 11 species groups, where relevant.

A list of species groups and names of species in each group is found in Appendix 1 C.

An example of the format used to input and store inventory data is shown in Appendix 1 D.

Data Handling

The initial step is to check and validate data, and to merge data from different sources within the same cell.

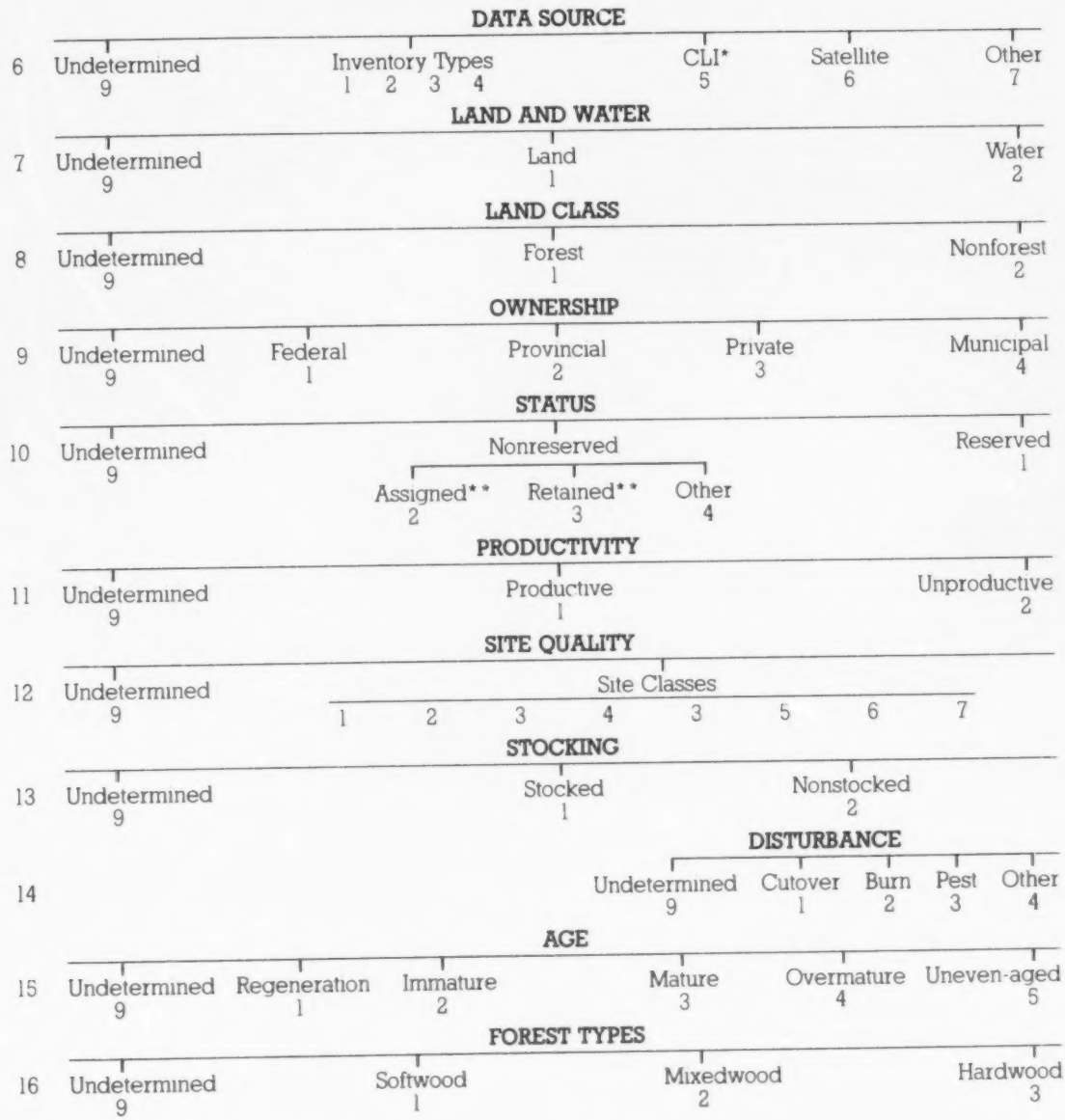
The primary data manipulation task within CFRDS is handled by a Data Management System (DMS). Specifically designed for CFRDS, it is made up of 10 user-friendly program modules written in FORTRAN. The primary purpose is to provide a rapid output capability.

In addition to the production of tabular summaries, the DMS is designed to produce data for mapping purposes. For example, if a map showing the distribution of forest land is to be produced, and if forest land is to be expressed as a percent of total cell area, the DMS will produce a list of reference numbers of cells, with corresponding values of "percent forest land."

Data Output

The primary output from the DMS is two sets of tables. One set is a summary of inventory data for all Canada, and the other set a summary by province and territory. These form the statistical basis for most of this report and are shown in Appendices 3 and 4.

A secondary DMS output mode is for "special requests;" it provides summaries of combinations of classes and attributes that are not included in the standard tables.



*CLI – Canada Land Inventory
**Crown land only
Note: The numbers in the left-hand column refer to the Field as in Appendix 3. The numbers in the body of the chart refer to the CFRDS codes given each class in these fields.

Figure A 1. CFRDS classification and stratification.

Map Production

The first step is to obtain, for each province and territory, a grid (index) map of cell boundaries and reference numbers. This information is digitized and stored on tape together with digitized data on Canada's shorelines, provincial boundaries, and major lakes.

To produce a map of a particular theme, e.g. "percent forest land," the tape with digitized information is combined with the data tape produced by the DMS and, using a computer-controlled plotter, the map is generated.

The maps in this report are produced by the Geocartographics Subdivision of Statistics Canada, under contract to the FSSB.

Appendix 1 A
Relationship between national and provincial or territorial classification systems

Abbreviations for Appendix 1A

BCFS	British Columbia Ministry of Forests (British Columbia Forest Service)
CLI	Canada Land Inventory
CFS	Canadian Forestry Service
DSD	Disturbed Stocking Doubtful
F.I.Z.	Forest Inventory Zone (K and L are zone identifiers)
for. conc.	forest concession
FRI	Forest Resource Inventory
FSSB	Forestry Statistics and Systems Branch
H	Hardwood
HS	Hardwood-Softwood
Kluane N.P.	Kluane National Park
M	Mixedwood
M.A.	Ministère d'Agriculture
MAI	Mean Annual Increment
MG	Maturity Group
M.T.F.	Ministère des Terres et Forêts
N	Nonforest
NC	Noncommercial
N Comm	Noncommercial Species
NPF	Nonproductive Forest
NSR	Not Sufficiently Restocked
S	Softwood
SH	Softwood-Hardwood
VC	Volume Class
Yukon RRAMS	An information retrieval system for renewable resource and management statistics

Appendix 1 A. Relationship between national and provincial or territorial classification systems.

Province or Territory	Name of Inventory	Area Inventoried (1 000 km²)	CFRDS Land Classes		CFRDS Ownership Classes				CFRDS Status Classes Nonreserved	
			Forest	Nonforest	Federal	Provincial	Private	Municipal	Assigned	Retained
			Provincial and Territorial Classes							
Newfoundland	Management	359		Agricultural cleared land Rock barren Soil Barren Bog Right of way Residential Sand	Federal Crown	All others	Bowater private Price private Private	Municipal	License charter	Crown
	Global and Labrador intensive		All others	Agricultural cleared land Rock barren Soil barren Bog	Federal Crown	All others Labrador is entirely provincial	Bowater private Price private Private	Municipal	Licenses	Crown Reid Nfld. Labrador is entirely retained Entirely retained
	Labrador extensive		All others	Bog Cleared land Rock barren Soil barren		Entirely provincial				
Nova Scotia	Nova Scotia forest inventory	55	Forest	Open bog Treed bog Alder brush Rock barren Agriculture and marsh Urban Transmission lines Tidal flat and marsh	Military reserves and Parks	Crown	Large owners Small owners		Provincial leased	Provincial unleased All federal
Prince Edward Island	Forest/ Biomass	6	All others	Agriculture Bog Cleared nonproductive Gravel pit Railway Recreation land Road Sand Swamp	Not Available					
New Brunswick	New Brunswick forest inventory	73	Cover type S SH HS H Plantation non-productive forest (NPF) Recent clearcut Recent burn Old field	Cover type Agricultural land Occupied Wasteland Rock outcrop Roads Railways Transmission lines	Crown land where cover type is undetermined	Crown land	Large and small freehold		Crown land	
Quebec		733	All other classes	Agricultural land Roads Transmission lines Other lands	Federal forests Indian reserves	Regular and special concession Vacant M.T.F. land Crown forests Special reserves Forestry station Tp. reserve Permanent reserves Vacant M.A. land	Small private property Larger private property		Reg. for. conc. Special for. conc.	Vacant M.T.F. land Crown forest Spec. reserve For. station Tp. reserve Indian reserv Vacant M.A. land

Appendix 1 A (cont'd)

Province or Territory	Name of Inventory	Area Inventoried ($1\,000\ km^2$)	CFRDS Land Classes		CFRDS Ownership Classes				CFRDS Status Classes Nonreserved	
			Forest	Nonforest	Federal	Provincial	Private	Municipal	Assigned	Retained
			Provincial and Territorial Classes							
Ontario	FRI	524	Non-productive forest Treed muskeg Open muskeg Brush and alder All working groups Rock Other non productive	Developed agricultural land Unclassified Grass and meadow	Indian reserves Other federal	Crown Provincial parks Recreational reserves	Patent Freehold Agreement forest			Crown
Manitoba	Provincial forest inventory	333	All others	Agricultural Bare rock Barren Fields Marsh Muskeg Unclassified (roads, towns)	Indian reserves Federal Crown	Provincial Crown All others including community pasture	Patented	Municipal Local government district	Inco land Forest management license	Provincial forest Permanent forest Wildlife management areas Specified area Provincial park
Saskatchewan		161	All forest types Non-forested land productive Treed swamp Treed rock Treed sand Permanent sample plots Silviculture reserves	Clear swamp Clear rock Brushland Roads Clear sand Gravel pit Air strip Mine Mud flats	Indian reserve CFS	All other forest records Exper. reserve Permanent sample Plots Silviculture reserves Recreation reserves	Patented land			All land except parks and air weapons ranges "SOUTH" "PRECM" "DELTA" "HNBAY"
Alberta	Phase I and Phase II	462	All others	Above treeline Brushland Clearings Cut banks Grassland Open muskeg Rock barren Sand	Federal parks Indian reserves	All others	Alienated			All others
	Phase III		All others	Clearings Cut banks Flooded land Grassland Open muskeg Rock barren Sand	Indian lands	All others	Alienated Patented			All others

Appendix 1 A (cont'd)

Province or Territory	Name of Inventory	Area Inventoried (1 000 km²)	CFRDS Land Classes		CFRDS Ownership Classes				CFRDS Status Classes Nonreserved	
			Forest	Nonforest	Federal	Provincial	Private	Municipal	Assigned	Retained
			Provincial and Territorial Classes							
British Columbia	BCFS inventory	839	Immature Mature Residual NSR N Comm DSD Alpine forest Nonproductive	Nonforest except for alpine forest and non-productive	National reserve National park Indian reserve Military reserve Canadian Government block	Unreserved provincial forest Forest unit Provincial parks Ecol. reserve Crown – experimental Crown – other reserves Crown – Christmas tree permit Crown – woodlot Crown – lease	Crown Grants	Municipal	Crown – timber alienated Crown – Christmas tree permit Crown – woodlot	National reserve Indian reserve Military reserve Canadian Government Block Unreserved Provincial forest Forest unit Crown lease
Yukon Territory	Yukon RRAMS	483	All records except "Water" and a % of "Other"	% of Other — the % ranges from 31.7 to 79.1 and depends on management unit	All forest records					All forest records except those from Kluane National Park
Northwest Territories	FSSB Reconnaissance survey	1093	S M H Cut Burn Other	N	All forest records					All forest records except those from Wood Buffalo National Park

Appendix 1 A (cont'd)

Province or Territory	Name of Inventory	CFRDS Status Classes: Nonreserved Other	CFRDS Status Classes: Reserved	CFRDS Productivity Classes: Productive	CFRDS Productivity Classes: Unproductive	CFRDS Site Index Classes: 1	CFRDS Site Index Classes: 2	CFRDS Site Index Classes: 3	CFRDS Stocking Classes: Stocked	CFRDS Stocking Classes: Nonstocked
		Provincial and Territorial Classes								
Newfoundland	Management	Private	Reserved	All others	Softwood scrub Hardwood scrub	Poor	Medium Good	High	Other forest types	NSR
	Global Labrador intensive	Bowater private Price private Private	Reserved	All others	Softwood scrub Hardwood scrub	Not Available			Other forest types	Burn Cutover Crown density of 0-24% Insect Various Wind
	Labrador extensive			All others	Softwood scrub Hardwood scrub	Not Available			All others	Burn Cut
Nova Scotia		Large and small owners	Military reserves and parks	All other combinations MAI, volume, and density	MAI class 1 and with volume class 1 and with density class 1	MAI class 5 (CLI Forest capability)	MAI class 4	MAI class 3	All other combinations of density, height, and volume	Density class 1 (<40%) and with Height class 1 (<5 m) and with Volume class 1 (<40 m³/ha) and with Age class 2 - 7 (> 20 year or uneven-aged)
Prince Edward Island	Forest/ Biomass	Not Available		All others	Alder Hedgerow	Not Available			All others	Alder (old field) Burn Cleared productive Clearcut Diseased Windfall
New Brunswick	New Brunswick forest inventory	Large and small freehold	Not used	S SH HS H Plantation Recent clearcut Recent burn Old field	Nonproductive forest (NPF)	Not Available			S SH HS H Plantation	Recent clearcut Recent cut Old field
Quebec		Small private property Large private property	Perma-nent reserve **Undeter-mined** Federal forest	All other forest land records	Dry barren land Moist barren land Alder	Not Available			Regeneration Immature Mature Plantation Partial disturbance	Being regenerated Waste land Burn Total Total blowdown Severe epidemic

Appendix 1 A (cont'd)

Province or Territory	Name of Inventory	CFRDS Status Classes Nonreserved Other	CFRDS Status Classes Reserved	CFRDS Productivity Classes Productive	CFRDS Productivity Classes Unproductive	CFRDS Site Index Classes 1	CFRDS Site Index Classes 2	CFRDS Site Index Classes 3	CFRDS Stocking Classes Stocked	CFRDS Stocking Classes Nonstocked
		Provincial and Territorial Classes								
Ontario	FRI	Indian reserves Agreement forest Patent Freehold	Recre. reserves **Undetermined status** Provincial park Federal land	Working groups Barren and scattered	Nonproductive forest Treed muskeg Open muskeg Birch and adler Pine, site 4 Spruce, site 4 Rock Other nonproductive	From height/age Curves			Working groups with more than 25% of basal area of normally stocked stand	Working groups with less than or equal to 25% of basal area of normally stocked stand Barren and scattered
Manitoba		Agriculture	Provincial crown closed		Protection forest Treed muskeg Treed rock Willow-alder	Combination of species and Provincial site class			All others	Cutting class 0 nonstocked
Saskatchewan			Parks ("PARKS") Air weapons range ("AWRGE") Permanent sample plots Silviculture reserves	All forest types Nonforested productive Does not include Federal land Patented land	Treed swamp Treed rock Treed sand	Not Available			All forest types Plantation	Cutover Burn Other
Alberta	Phase I and Phase II	Alienated	Federal parks	All others	Cleared Stunted due to elevation Treed muskeg	Poor	Medium	Good	All others	Potentially productive
	Phase III	Alienated patented		All others	Treed muskeg Coniferous scrub Deciduous scrub	Very poor Poor	Medium	Good	All others	Density class A
British Columbia		Crown grants Municipal	Provincial parks Ecological reserve Crown - experimental Crown - other reserves National parks	Immature Mature Residual NSR N Comm DSD	Alpine forest Nonproductive (NP)	Site class is computed using the age and height class midpoint, the major species and in some cases whether the stand is coastal or in the interior. The following equation is used. $SI = H/b_1(1 - e^{b^2A})^{b^3}$ This is also cross-checked against BC site index at 100 years. The site is undetermined if age or height data is absent.			Immature Mature Residual	NSR **Undetermined Stocking** DSD
Yukon Territory			Kluane N.P.	Sawtimber Pulp and young growth Hardwood Burned	Remaining % of "Other" - the % ranges from 20.9 to 68.3% depending on the management unit	Not Available			Sawtimber Pulp and young growth Hardwood	Burned
Northwest Territories			Wood Buffalo National Park	Site Class 1,2,3 **Undetermined productivity** Cut, Burn, and Other	Site Class 4,5	Site Class 3	Site Class 2	Site Class 1	Softwood Mixedwood Hardwood of site class 1-3	Cut Burned Other

Appendix 1 A (cont'd)

Province or Territory	Name of Inventory	CFRDS Disturbance Classes				CFRDS Age Classes					CFRDS Forest Types		
		Cutover	Burn	Pest	Other	Regeneration	Immature	Mature	Overmature	Uneven-aged	Softwood	Mixedwood	Hardwood
		Provincial and Territorial Classes											
Newfoundland	Management	Cut	Burn	Insect	Various wind vegetation		Age 1–40 years	Age 40–880 years	Age 80 + years		Balsam fir Black spruce	Softwood-Hardwood Hardwood-Softwood	Trembling aspen White birch
	Global Labrador intensive	Cut	Burn	Insect	Wind Various	Not Available						Softwood-Hardwood Hardwood-Softwood	Hardwood
	Labrador extensive	Cut	Burn	Insect	Wind Various	Not Available						Softwood-Hardwood Hardwood-Softwood	Hardwood
Nova Scotia		Not Available				Age class 1 or 2 (<40 years) Volume class 1 (<40 m^3/ha) Density class 1 or 2 (<60%) and Height class 1 (<5 m)	Age class 1 or 2 (<40 years) Volume class 2–5 (>80 m^3/ha) Density class 2–5 (>40%) and Height class 2–6 (>5 m)	Age class 3 or 4 (41–80 years)	Age class 5 or 6 (>80 years)	Age class 7 (uneven-aged)	Softwood	Mixedwood	Hardwood
Prince Edward Island	Forest/ Biomass	Clear-cut	Burn	Dis-eased	Alder (old farm) Cleared productive Wind-fall	Plantation					Volume strata 1,2,3 Plantation	Volume strata 4,5,6,7,8,9	Volume strata 10,11,12
New Brunswick	New Brunswick forest inventory	Recent clear-cut	Re-cent burn	Not used	Old field	Plantation	MG II and VC 2, 3 MG IV and VC 1, 2,3	MG I and VC 3,4,5 MG II and VC 4,5	MG III VC 1,2		Softwood	Softwood-Hardwood Hardwood-Softwood	Hardwood
Quebec		Being regener ated Total cut	Burn	Sev-ere epi-demic	Waste land Total blow-down	Regeneration	Immature	Regular mature Two-storied mature Irregular mature	Not used	Not used	Softwood	Mixedwood	Hardwood
Ontario	FRI	Not Available				0 to 1/3R R = rotation age	1/3R to R	R to (R + 20) years	more than R + 20 years		By % of basal area that is coniferous >75%	25–75%	<25%
Manitoba		Not Available				Established regeneration	Poleszed Inter-mediate	Mature	Over-mature		Softwood	Softwood-Hardwood Hardwood-Softwood	Hardwood
Saskatchewan		Cutover Stripcut Scar-fied	Burn		Grass-land Clear-ing Brush land Blow-down	Not Available					Softwood Plantation	Mixedwood	Hardwood

Appendix 1 A (concluded)

Province or Territory	Name of Inventory	CFRDS Disturbance Classes				CFRDS Age Classes					CFRDS Forest Types		
		Cutover	Burn	Pest	Other	Regeneration	Immature	Mature	Overmature	Uneven-aged	Softwood	Mixedwood	Hardwood
		Provincial and Territorial Classes											
Alberta	Phase I and Phase II	---------- Not Available --------				Regeneration	Young Immature	Mature	Overmature		Softwood	Softwood-Hardwood Hardwood-Softwood	Hardwood
	Phase III	Clearcut	Burn Re-cent burn		Wind-fall	Regeneration	Young Immature	Mature	Overmature		All others	Aspen blend working group	Aspen working group
British Columbia					NSR NComm	Age class 1 1-20 years	Immature	Mature	Age class 8 or 9 (over 141 yr) F1 Z K or L and species is Cotton wood and Aspen	Residual	1st two major species are Softwood	Softwood-Hardwood or Hardwood-Softwood for 1st two major species	1st two major species are Hardwood
Yukon Territory			Burn			% of Pulp and young growth % depends on management unit	Remaining % of pulp and young growth	Sawtimber		**Undetermined age class** Hardwood	Saw-timber pulp and young growth		Hardwood
Northwest Territories		Cut	Burn		Other	Age class 1 (regeneration)	Age class 2 (immature)	Age class 3 (mature)	Age class 4 (overmature)		Softwood	Mixedwood	Hardwood

Appendix 1 B
CFRDS terms and definitions

These terms and definitions are largely taken from *A Guide to Canadian Forest Inventory Terminology and Usage* (Bonnor 1978); if no number is given in brackets at the end of a definition, the definition is specific to this inventory.

References:

(1) The Canadian Forest Inventory Committee
(2) Society of American Foresters (SAF). Forestry Terminology, 3rd ed. Published by SAF, Washington, D.C., 1958.
(3) Society of American Foresters (SAF). Terminology of Forest Science, Technology Practice and Products. Multilingual Forestry Terminology Series No. 1, Published by SAF, Washington, D.C., 1971.
(4) Empire Forestry Association (EFA). British Commonwealth Forest Terminology, Part 1. Published by EFA, London, England, 1953.

Data Source

Undetermined: Data not available or not relevant.

Inventory Type

Reconnaissance: An exploratory, extensive forest inventory with no detailed estimates obtained (1).

A formal sampling design is generally not used, and no precision estimates are obtained.

Regional: A detailed, extensive forest inventory for planning on a regional or provincial basis (1).

Major forest types are usually mapped, with estimates given for each type. Precision estimates given for total inventory volume.

Management: A detailed, intensive forest inventory for management purposes, of an area managed as one unit (1).

The forest types are usually mapped in detail with estimates given for each type. Precision estimates given for total inventory volume.

Operational: An intensive forest inventory of a small area for harvesting purposes (1).

Individual stands are mapped, with estimates given for each stand.

Ownership

Federal Land: Crown land within the jurisdiction of the federal government.

Provincial Land: Crown land within the jurisdiction of a provincial government.

Private Land: Land that is not the property of the Crown (1).

Municipal Land: Land that is the property of a municipality.

Status

Reserved (Land): Forest land that by law or policy is not available for the harvesting of forest crops (1).

Nonreserved (Land): Forest land that by law or policy is available for the harvesting of forest crops (1).

Assigned (Land): Crown-owned forest land no longer under the direct, immediate control of the Crown (1).

Includes Crown land that has been leased or licensed to private agencies. Previously referred to as alienated or allocated land.

Retained (Land): Crown-owned forest land under the direct, immediate control of the Crown (1).

Other Nonreserved (Land): Private or municipal forest land that is available for harvesting forest crops.

Productivity

Productive: Forest land that is capable of producing a merchantable stand within a reasonable length of time (1).

Unproductive: Forest land that is incapable of producing a merchantable stand within a reasonable length of time (1), and specifically having a site index rating of less than 5 m at base age 50. Includes muskeg, rock, barrens, marshes, meadow, etc. within forest land area.

Site Quality

Site Quality: A measure of the relative productive capacity of a site for one or more species (1).

Two principal measures are site capability and site index.

Site Capability: The mean annual increment in merchantable volume that can be expected for a forest area, assuming it is fully stocked by one or more species best adapted to the site, at or near rotation age (1).

Expressed in cubic metres per hectare.

Site Capability Class: Any interval into which the site capability range is divided for purposes of classification and use (1).

Site Index: An expression of forest site quality based on the height, at a specified age, of dominant and codominant trees in a stand (1).

May be grouped into site classes. Expressed in metres. Usually refers to a particular species.

Site Class: Any interval into which the site index range is divided for purposes of classification and use (1).

Stocking

Stocking: A qualitative expression of the adequacy of tree cover on an area, in terms of crown closure, number of trees, basal area, or volume, in relation to a preestablished norm (1).

In this context, tree cover includes seedlings and saplings, hence the concept carries no connotation of a particular age.

Degree of stocking may be classified as:
(a) Stocked versus Nonstocked;
(b) Understocked, Fully Stocked, or Overstocked. It may also be expressed as a percentage of the preestablished norm or stocking factor.

Stocked Forest Land: Land supporting tree growth (1).
In this context, tree growth includes seedlings and saplings.

Nonstocked Forest Land: Land capable of producing but generally lacking in tree growth (2).

Includes cutover, burn.

Disturbance

Cutover: An area of forest land from which some or all the timber has recently been cut (1).

Burn (Burned-over): Land that has recently been burned (1).

Pests: Forest land on which some or all trees have been killed by insects or disease.

Age

Regeneration: The renewal of a forest crop by natural or artificial means.

Also the new crop so obtained (4).

The new crop is generally less than one metre in height.

Immature: In even-aged management, those trees or stands that have grown past the regeneration stage, but are not sufficiently developed to be harvestable (except for thinning operations) (1).

Mature: Stands or forest types at or near rotation age. Growth has culminated.

Overmature: Stands or forest types past rotation age. Openings in canopy as a result of mortality becoming apparent.

Even-aged: Of a forest, stand, or forest type in which small age differences exist between individual trees (1). The maximum differences in age permitted is usually 10–20 years; if the stand will not be harvested until it is 100–200 years old, larger differences up to 25% of the rotation age may be allowed.

Uneven-aged: Of a forest, stand, or forest type in which intermingling trees differ markedly in age (3).

The minimum difference in age permitted in an uneven-aged stand is usually 10–20 years.

Forest Types

Softwood: A forest type in which 76–100 % of the canopy is coniferous.

Mixedwood: A forest type in which 26–75 % of the canopy is coniferous.

Hardwood: A forest type in which 0–25 % of the canopy is coniferous.

Appendix 1 C
Names of tree species in CFRDS species groups

Species Code	Group Name	Species	
		Common Name	**Botanical Name**
1	**Spruce**	White spruce	*Picea glauca* (Moench) Voss
		Engelmann spruce	*Picea engelmannii* Parry
		Sitka spruce	*Picea sitchensis* (Bong.) Carr.
		Red spruce	*Picea rubens* Sarg.
		Black spruce	*Picea mariana* (Mill.) B.S.P.
		Norway spruce	*Picea abies* (L.) Karst.
2	**Pine**	Eastern white pine	*Pinus strobus* L.
		Western white pine	*Pinus monticola* Dougl.
		Whitebark pine	*Pinus albicaulis* Engelm.
		Ponderosa pine	*Pinus ponderosa* Laws.
		Pitch pine	*Pinus rigida* Mill.
		Red pine	*Pinus resinosa* Ait.
		Jack pine	*Pinus banksiana* Lamb.
		Lodgepole pine	*Pinus contorta* Dougl.
		Scots pine	*Pinus sylvestris* L.
		Austrian pine	*Pinus nigra* Arnold
		Mugho pine	*Pinus mugo* Turra var. *mughus* Zenari
3	**Fir**	Balsam fir	*Abies balsamea* (L.) Mill.
		Alpine fir	*Abies lasiocarpa* (Hook.) Nutt.
		Amabilis fir	*Abies amabilis* (Dougl.) Forbes
		Grand fir	*Abies grandis* (Dougl.) Lindl.
4	**Hemlock**	Eastern hemlock	*Tsuga canadensis* (L.) Carr.
		Western hemlock	*Tsuga heterophylla* (Raf.) Sarg.
		Mountain hemlock	*Tsuga mertensiana* (Bong.) Carr
5	**Cedar**	Arbor-vitae	*Thuja* L.
		Eastern white cedar	*Thuja occidentalis* L.
		Western red cedar	*Thuja plicata* Donn
		Yellow cedar	*Chamaecyparis nootkatensis* (D. Don) Spach
		Eastern red cedar	*Juniperus virginiana* L.
		Western yew	*Taxus brevifolia* Nutt.
6	**Douglas-fir**	Douglas-fir	*Pseudotsuga menziesii* (Mirb.) Franco *Pseudotsuga menziesii* var. *glauca* (Beissn.) Franco
7	**Undifferentiated Coniferous Species, including:**		
		Tamarack	*Larix laricina* (Du Roi) K. Koch
		Western larch	*Larix occidentalis* Nutt.
		European larch	*Larix decidua* Mill.
8	**Aspen/poplar**	Trembling aspen	*Populus tremuloides* Michx.
		Largetooth aspen	*Populus grandidentata* Michx.
		Balsam poplar	*Populus balsamifera* L.
		Eastern cottonwood	*Populus deltoides* Bartr.
		Black cottonwood	*Populus trichocarpa* Torr. & Gray
		European white poplar	*Populus alba* L.
		Carolina poplar	*Populus x canadensis* Moench

Appendix 1 C (concluded)

Species Code	Group Name	Species	
		Common Name	**Botanical Name**
9	**Birch**	Yellow birch	*Betula alleghaniensis* Britton
		White birch	*Betula papyrifera* Marsh.
		Grey birch	*Betula populifolia* Marsh.
10	**Maple**	Sugar maple	*Acer saccharum* Marsh.
		Black maple	*Acer nigrum* Michx. f.
		Bigleaf maple	*Acer macrophyllum* Pursh
		Silver maple	*Acer saccharinum* L.
		Red maple	*Acer rubrum* L.
		Vine maple	*Acer circinatum* Pursh
		Manitoba maple	*Acer negundo* L.
11	**Undifferentiated**	**Deciduous species, including:**	
		Black willow	*Salix nigra* Marsh.
		Butternut	*Juglans cinerea* L.
		Black walnut	*Juglans nigra* L.
		Shagbark hickory	*Carya ovata* (Mill.) K. Koch
		Pignut hickory	*Carya glabra* (Mill.) Sweet
		Bitternut hickory	*Carya cordiformis* (Wang.) K. Koch
		Hop-hornbeam	*Ostrya virginiana* (Mill.) K. Koch
		Red alder	*Alnus rubra* Bong.
		Sitka alder	*Alnus sinuata* (Reg.) Rydb.
		Beech	*Fagus grandifolia* Ehrh.
		White oak	*Quercus alba* L.
		Bur oak	*Quercus macrocarpa* Michx.
		Swamp white oak	*Quercus bicolor* Willd.
		Dwarf Chinquapin oak	*Quercus prinoides* Willd.
		Chestnut oak	*Quercus prinus* L.
		Red oak	*Quercus rubra* L.
		Black oak	*Quercus velutina* Lam.
		Pin oak	*Quercus palustris* Muenchh.
		White elm	*Ulmus americana* L.
		Rock elm	*Ulmus thomasii* Sarg.
		Slippery elm	*Ulmus rubra* Mühl.
		Red mulberry	*Morus rubra* L.
		Tulip-tree	*Liriodendron tulipifera* L.
		Sassafras	*Sassafras albidum* (Nutt.) Nees
		Black cherry	*Prunus serotina* Ehrh.
		Cascara	*Rhamnus purshiana* DC.
		Basswood	*Tilia americana* L.
		Black gum	*Nyssa sylvatica* Marsh.
		Arbutus	*Arbutus menziesii* Pursh
		White ash	*Fraxinus americana* L.
		Red ash	*Fraxinus pennsylvanica* Marsh.
		Blue ash	*Fraxinus quadrangulata* Michx.
		Black ash	*Fraxinus nigra* Marsh.
		Green ash	*Fraxinus pennsylvanica* var. *subintegerrima* (Vahl) Fern.

Appendix 1 D
CFRDS input data: Format, classes, and codes

1. Data storage format with example

Location					Classification			Attributes				
								Volume Group				
Province or Territory	Forest Reg/ Section	Electoral District	Other Reference	UTM Reference	CFRDS Codes	Year	Area	1	2	3	4	
1	2	3	4	5	6-16	17	18	19	20	21	22	Field
12	34	567	8901234567	8901234	56789012345	67	8901234	56789012	34567890	12345678	90123456	
08			12930		31121191991	78	384	4816515	690470	142704	0	
08			12930		31121191992	78	2353	4306997	134366	98364	0	
08			12930		31121191993	78	12792	438096	117017	35800	0	
08			12930		31121192499	78	542	0	0	0	0	
08			12930		31121299999	78	36	0	0	0	0	
08			12930		31299999999	78	1444	0	0	0	0	
08			12930		32999999999	78	129	0	0	0	0	
08			13030		31121191991	78	1076	7135351	153885	321490	0	
08			13030		31121191992	78	9449	6161686	36458	51143	0	
08			13030		31121191993	78	61526	1006450	144777	116569	0	
08			13030		31121192199	78	20	0	0	0	0	
08			13030		31121192499	78	874	0	0	0	0	
08			13030		31121299999	78	501	0	0	0	0	
08			13030		31299999999	78	9983	0	0	0	0	
08			13030		32999999999	78	12132	0	0	0	0	

Volume Group							Filler	
5	6	7	8	9	10	11		
23	24	25	26	27	28	29	30	Field
78901234	56789012	34567890	12345678	90123456	78901234	56789012	34567890123456789012345678 90	
0	0	359587	675987	101572	0	0		
0	0	13897	7780013	271736	0	0		
0	0	8811	5813514	257422	0	0		
0	0	0	0	0	0	0		
0	0	0	0	0	0	0		
0	0	0	0	0	0	0		
0	0	0	0	0	0	0		
0	0	420902	757279	126120	0	0		
0	0	5071	11553741	440820	0	0		
0	0	4533	9921983	546060	0	0		
0	0	0	0	0	0	0		
0	0	0	0	0	0	0		
0	0	0	0	0	0	0		
0	0	0	0	0	0	0		

2. Codes

(a) Location Codes

Field No. 1: Province or Territory

Code		
	1	Newfoundland
	2	Nova Scotia
	3	Prince Edward Island
	4	New Brunswick
	5	Quebec
	6	Ontario
	7	Manitoba
	8	Saskatchewan
	9	Alberta
	10	British Columbia
	11	Yukon Territory
	12	Northwest Territories

Field No. 2: Forest Region/Section

- Forest Region – major geographic belt or zone characterized by a distinctive group of dominant tree species.
- Forest Section – Subdivision of Forest Region
- Not implemented

Field No. 3: Electoral Districts

- Not implemented

Field No. 4: Other Reference

- cells referenced other than UTM, one type per location

Field No. 5: UTM Reference

- cells referenced to 100-km^2 UTM grid: Zone-Easting-Northing

Appendix 1 D (cont'd)

(b) Classification Codes

Field No. 6: Data Source

Code		
	9	Undetermined
	1	Inventory Type: reconnaissance
	2	: regional
	3	: management
	4	: operational
	5	CLI
	6	Satellite
	7	Other

Field No. 7: Land and Water

Code		
	9	Undetermined
	1	Land
	2	Water

Field No. 8: Land Class

Code		
	9	Undetermined
	1	Forest
	2	Nonforest

Field No. 9: Ownership

Code		
	9	Undetermined
	1	Federal
	2	Provincial
	3	Private
	4	Municipal

Field No. 10: Status

Code			
	9	Undetermined	
	1	Reserved	
	2	Assigned	Nonreserved
	3	Retained	
	4	Other	

Field No. 11: Productivity

Code		
	9	Undetermined
	1	Productive
	2	Unproductive

Appendix 1 D (cont'd)

Field No. 12: Site Quality

Code	9	Undetermined
	1	Site classes: 5.0– 9.9 m
	2	10.0–14.9 m
	3	15.0–19.9 m
	4	20.0–24.9 m
	5	25.0–29.9 m
	6	30.0–34.9 m
	7	35.0 + m

Field No. 13: Stocking

Code	9	Undetermined
	1	Stocked
	2	Nonstocked

Field No. 14: Disturbance

Code	9	Undetermined
	1	Cutover
	2	Burn
	3	Pest
	4	Other

Field No. 15: Age

Code	9	Undetermined
	1	Regeneration
	2	Immature
	3	Mature
	4	Overmature
	5	Uneven-aged

Field No. 16: Forest Types

Code	9	Undetermined
	1	Softwood
	2	Mixedwood
	3	Hardwood

Appendix 1 D (concluded)

(c) Attribute Codes

Field No. 17: Year

– for each record, the year in which the information was obtained.

Field No. 18: Area

– in km^2, 3 decimals

Fields No. 19–29: Volume Groups

– volumes in m^3/km^2, three decimals, gross merchantable

Code 1 Spruce
2 Pine
3 Fir
4 Hemlock
5 Cedar
6 Douglas-fir
7 Coniferous unspecified
8 Aspen/poplar
9 Birch
10 Maple
11 Deciduous unspecified

Appendix 2
Provincial and territorial merchantability standards

Province or Territory	Minimum Tree Size (diameter at breast height outside bark)	Stump Height	Minimum Top Diameter (inside bark)
		cm	
Newfoundland	9.0	15	7.6
Prince Edward Island*	9.0	25	8.0
Nova Scotia	9.0	variable, average is 10	9.0
New Brunswick	12.0	30	7.0
Quebec	9.0	15	9.0
Ontario	10.2	30	10.2
Manitoba	9.1	30	10.2 except 7.6 for spruce, fir, and pine
Saskatchewan	9.1	30	7.6
Alberta	10.2	30	7.6
British Columbia**	17.5	30	10.0
Yukon Territory	9.1	30	7.6
Northwest Territories	10.2	30	10.2

* P.E.I. reports gross total volume
** B.C. reports net merchantable volume

NOTES ON SUMMARY TABLES OF INVENTORIED AREAS

The data given here can be expected to differ somewhat from data presented in provincial and territorial reports because:

a) data are summarized by different classes based on different terms and definitions;
b) data may come from more recent inventories;
c) provincial summaries may exclude federal land that is included here.

Notes on specific provincial or territorial characteristics

Prince Edward Island: Volumes are gross total, not gross merchantable.
Classification of data by ownership, status, age, and site is not available.

Nova Scotia: Because of the recent spruce budworm epidemic, significant forest changes have taken place in Cape Breton. These have not yet been measured, hence no detailed data are given for Cape Breton.

Quebec: The status of forest land is changing rapidly; many areas classified as "assigned" (to companies) in the older inventories may now be "retained" (by the Crown).

Manitoba: The southwest corner of the province is being inventoried. Preliminary figures indicate unexpectedly high forest areas and hardwood volumes on the private, predominantly agricultural lands. These changes will be incorporated in the next national report.

Saskatchewan: The data presented are Township Maintenance Data. Summary of these data was terminated in 1976. Areas and volumes given are not all commercially available. The province intends to have the commercially available forest classified by age before 1986.

Alberta: The data given are old data, of doubtful accuracy. New inventory data will be available by 1984.

British Columbia: Volumes are net merchantable. The data exclude a large portion of private forest land that is inventoried but not available for computer summary by cells.

Appendix 3
Summary tables of inventory data – National format

Table No.	Title
N 1	Area of land and water, and land class
N 2	Area of forest land by productivity, stocking, and ownership
N 3	Area of productive forest land by status and ownership
N 4	Area of productive forest land by status, stocking, and ownership
N 5	Volume (gross merchantable) on stocked, productive forest land by status and ownership
N 6	Area of stocked, productive, nonreserved forest land by age class, forest type, and ownership
N 7	Area of stocked, productive, nonreserved forest land by forest type and site class
N 8	Area of stocked, productive, nonreserved forest land by forest type and ownership
N 9	Area of stocked, productive, nonreserved forest land by age class and ownership
N 10	Volume (gross merchantable) on stocked, productive, nonreserved forest land by species group and ownership
N 11	Volume (gross merchantable) on stocked, productive, nonreserved forest land by age class, forest type, and ownership
N 12	Volume (gross merchantable) on stocked, productive, nonreserved forest land by forest type and site class
N 13	Volume (gross merchantable) on stocked, productive, nonreserved forest land by forest type and ownership
N 14	Volume (gross merchantable) on stocked, productive, nonreserved forest land by age class and ownership
N 15	Volume per hectare (gross merchantable) on stocked, productive, nonreserved forest land by forest type and site class
N 16	Area of nonstocked, productive, nonreserved forest land by disturbance and site class
N 17	Area of nonstocked, productive, nonreserved forest land by disturbance and ownership
N 18	Area of nonstocked, productive, nonreserved forest land by disturbance and date of inventory
N 19	Area of nonreserved forest land by data source and date of inventory

Table N 1 Canada's Forest Inventory – 19

Area of LAND AND WATER and LAND CLASS

Summary for Canada

Land and Water	Area (1 000 km²)	Land Class	
Land	4 473.35	Forest	3 424.91
Water	485.73	Nonforest	946.99
Undetermined	162.18	Undetermined	263.60
Total	5 121.26	**Total**	4 635.50

Note: Totals may not add due to rounding.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 2 Canada's Forest Inventory – 19

Area of FOREST LAND by PRODUCTIVITY, STOCKING, and OWNERSHIP

Summary for Canada

Productivity and Stocking	Ownership Classes					Total
	Federal	Provincial	Private	Municipal	Undetermined	
	Area (1 000 km²)					
Productive						
Stocked	230.31	1 567.16	164.05	0.64	2.58	1 964.73
Nonstocked	21.07	192.25	15.76	0.06	0.38	229.52
Undetermined	0.22	7.35	0.22	0.00	0.00	7.79
Subtotal	251.61	1 766.74	180.03	0.70	2.96	2 202.05
Unproductive	635.46	533.33	13.91	0.16	0.10	1 182.96
Undetermined	31.98	2.86	5.05	0.00	0.00	39.90
Total	919.06	2 302.93	199.00	0.86	3.07	3 424.91

Note: Totals may not add due to rounding.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 3 Canada's Forest Inventory – 1981

Area of PRODUCTIVE FOREST LAND by STATUS and OWNERSHIP

Summary for Canada

Status	Ownership Classes					
	Federal	Provincial	Private	Municipal	Undetermined	**Total**
	Area (1 000 km²)					
Nonreserved						
Assigned	0.27	245.68	0.00	0.00	0.00	245.95
Retained	216.85	1 501.40	0.00	0.43	0.00	1 718.68
Other	0.00	0.00	180.03	0.27	0.00	180.30
Subtotal	217.12	1 747.08	180.03	0.70	0.00	2 144.93
Reserved	34.32	14.31	0.00	0.00	0.05	48.68
Undetermined	0.17	5.35	0.00	0.00	2.92	8.44
Total	251.61	1 766.74	180.03	0.70	2.96	2 202.05

Note: Totals may not add due to rounding.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 4 Canada's Forest Inventory – 1981

Area of PRODUCTIVE FOREST LAND by STATUS, STOCKING, and OWNERSHIP

Summary for Canada
Ownership: All

Stocking	Status Classes						
		Nonreserved					
	Reserved	Assigned	Retained	Other	Total	Undetermined	**Total**
	Area (1 000 km²)						
Stocked	46.06	230.34	1 516.19	164.32	1 910.84	7.83	1 964.73
Nonstocked	2.43	15.59	195.12	15.77	226.49	0.60	229.52
Undetermined	0.20	0.03	7.35	0.22	7.60	0.00	7.79
Total	48.68	245.95	1 718.66	180.32	2 144.93	8.44	2 202.05

Note: Totals may not add due to rounding.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of PRODUCTIVE FOREST LAND by STATUS, STOCKING, and OWNERSHIP

Summary for Canada
Ownership: Federal

Stocking	Status Classes						
		Nonreserved					
	Reserved	Assigned	Retained	Other	Total	Undetermined	**Total**
	Area (1 000 km²)						
Stocked	32.94	0.23	197.05	0.02	197.30	0.09	230.32
Nonstocked	1.24	0.04	19.71	0.00	19.75	0.08	21.07
Undetermined	0.15	0.00	0.07	0.00	0.07	0.00	0.22
Total	34.32	0.27	216.83	0.02	217.12	0.17	251.61

Note: Totals may not add due to rounding.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of PRODUCTIVE FOREST LAND by STATUS, STOCKING, and OWNERSHIP

Summary for Canada
Ownership: Provincial

Stocking	Status Classes						
		Nonreserved					
	Reserved	Assigned	Retained	Other	Total	Undetermined	**Total**
	Area (1 000 km²)						
Stocked	13.08	230.10	1 318.76	0.00	1 548.86	5.20	1 567.14
Nonstocked	1.19	15.55	175.36	0.00	190.92	0.15	192.25
Undetermined	0.05	0.03	7.28	0.00	7.31	0.00	7.35
Total	14.31	245.68	1 501.40	0.00	1 747.08	5.35	1 766.74

Note: Totals may not add due to rounding.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 4 C Canada's Forest Inventory – 1981

Area of PRODUCTIVE FOREST LAND by STATUS, STOCKING, and OWNERSHIP

Summary for Canada
Ownership: Private

Stocking	Status Classes						
		Nonreserved					
	Reserved	Assigned	Retained	Other	Total	Undetermined	**Total**
	Area (1 000 km²)						
Stocked	0.00	0.00	0.00	164.05	164.05	0.00	164.05
Nonstocked	0.00	0.00	0.00	15.76	15.76	0.00	15.76
Undetermined	0.00	0.00	0.00	0.22	0.22	0.00	0.22
Total	0.00	0.00	0.00	180.03	180.03	0.00	180.03

Note: Totals may not add due to rounding.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 4 D Canada's Forest Inventory – 1981

Area of PRODUCTIVE FOREST LAND by STATUS, STOCKING, and OWNERSHIP

Summary for Canada
Ownership: Municipal

Stocking	Status Classes						
		Nonreserved					
	Reserved	Assigned	Retained	Other	Total	Undetermined	**Total**
	Area (1 000 km²)						
Stocked	0.00	0.00	0.38	0.25	0.63	0.00	0.64
Nonstocked	0.00	0.00	0.05	0.01	0.06	0.00	0.06
Undetermined	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.43	0.27	0.70	0.00	0.70

Note: Totals may not add due to rounding.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 4 E Canada's Forest Inventory – 1981

Area of PRODUCTIVE FOREST LAND by STATUS, STOCKING, and OWNERSHIP

Summary for Canada
Ownership: Undetermined

Stocking	Status Classes						
		Nonreserved					
	Reserved	Assigned	Retained	Other	Total	Undetermined	**Total**
	Area (1 000 km^2)						
Stocked	0.04	0.00	0.00	0.00	0.00	2.54	2.58
Nonstocked	0.01	0.00	0.00	0.00	0.00	0.37	0.38
Undetermined	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.05	0.00	0.00	0.00	0.00	2.92	2.96

Note: Totals may not add due to rounding.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 5 Canada's Forest Inventory – 1981

Volume (Gross Merchantable) on STOCKED, PRODUCTIVE FOREST LAND by STATUS and OWNERSHIP

Summary for Canada

Status	Ownership Classes					
	Federal	Provincial	Private	Municipal	Undetermined	**Total**
	Volume (1 000 m^3)					
Nonreserved						
Assigned	1 172	2 289 429	0	0	0	2 290 601
Retained	765 105	15 171 156	0	1 648	0	15 937 909
Other	0	0	1 377 128	4 793	0	1 381 921
Subtotal	766 277	17 460 585	1 377 128	6 441	0	19 610 431
Reserved	19 093	170 621	0	26	359	190 100
Undetermined	443	67 710	0	0	33 320	101 473
Total	785 814	17 698 916	1 377 128	6 467	33 679	19 902 004

Note: Totals may not add due to rounding.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 6 — Canada's Forest Inventory – 1981

Area of STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by AGE CLASS, FOREST TYPE, and OWNERSHIP

Summary for Canada
Ownership: All

Forest Type	Age Classes						Total
	Regeneration	Immature	Mature	Overmature	Uneven-aged	Undetermined	
	Area (1 000 km²)						
Softwood	99.52	468.95	516.66	44.50	3.06	103.26	1 235.94
Mixedwood	35.26	249.99	116.22	13.14	1.43	16.93	432.96
Hardwood	20.27	137.89	55.76	5.40	0.17	20.04	239.53
Undetermined	4.76	0.03	0.00	0.00	0.00	0.08	4.87
Total	159.81	856.85	688.65	63.03	4.66	140.30	1 913.30

Note: Totals may not add due to rounding.
For P.E.I., status is undetermined; both reserved and nonreserved classes are included.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 6 A — Canada's Forest Inventory – 1981

Area of STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by AGE CLASS, FOREST TYPE, and OWNERSHIP

Summary for Canada
Ownership: Federal

Forest Type	Age Classes						Total
	Regeneration	Immature	Mature	Overmature	Uneven-aged	Undetermined	
	Area (1000 km²)						
Softwood	20.94	48.99	21.76	0.16	0.08	0.03	91.96
Mixedwood	6.09	63.48	25.27	0.02	0.05	0.01	94.92
Hardwood	0.91	6.06	2.83	0.01	0.01	0.49	10.31
Undetermined	0.00	0.00	0.00	0.00	0.00	0.08	0.09
Total	27.95	118.54	49.87	0.19	0.14	0.61	197.29

Note: Totals may not add due to rounding.
For P.E.I., status is undetermined; both reserved and nonreserved classes are included.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 6 B Canada's Forest Inventory – 1981

Area of STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by AGE CLASS, FOREST TYPE, and OWNERSHIP

Summary for Canada
Ownership: Provincial

Forest Type	Age Classes						Total
	Regeneration	Immature	Mature	Overmature	Uneven-aged	Undetermined	
	Area (1 000 km²)						
Softwood	75.40	396.69	478.09	42.34	1.52	100.83	1 094.86
Mixedwood	25.69	150.48	75.33	11.15	0.34	15.68	278.67
Hardwood	15.64	97.40	39.15	4.11	0.03	18.79	175.12
Undetermined	0.18	0.02	0.00	0.00	0.00	0.00	0.21
Total	116.91	644.60	592.57	57.60	1.89	135.31	1 548.86

Note: Totals may not add due to rounding.
For P.E.I., status is undetermined; both reserved and nonreserved classes are included.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 6 C Canada's Forest Inventory – 1981

Area of STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by AGE CLASS, FOREST TYPE, and OWNERSHIP

Summary for Canada
Ownership: Private

Forest Type	Age Classes						Total
	Regeneration	Immature	Mature	Overmature	Uneven-aged	Undetermined	
	Area (1 000 km²)						
Softwood	3.17	23.10	16.76	2.00	1.47	1.49	47.99
Mixedwood	3.48	35.98	15.61	1.96	1.04	0.38	58.45
Hardwood	3.68	34.17	13.72	1.29	0.13	0.05	53.04
Undetermined	4.57	0.00	0.00	0.00	0.00	0.00	4.57
Total	14.89	93.25	46.10	5.25	2.64	1.92	164.05

Note: Totals may not add due to rounding.
For P.E.I., status is undetermined; both reserved and nonreserved classes are included.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 6 D — Canada's Forest Inventory – 1981

Area of STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by AGE CLASS, FOREST TYPE, and OWNERSHIP

Summary for Canada
Ownership: Municipal

Forest Type	Age Classes						Total
	Regeneration	Immature	Mature	Overmature	Uneven-aged	Undetermined	
	Area (1 000 km²)						
Softwood	0.00	0.17	0.05	0.00	0.00	0.00	0.22
Mixedwood	0.00	0.05	0.01	0.00	0.00	0.00	0.06
Hardwood	0.05	0.25	0.06	0.00	0.00	0.00	0.35
Undetermined	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.05	0.47	0.11	0.00	0.00	0.00	0.63

Note: Totals may not add due to rounding.
For P.E.I., status is undetermined; both reserved and nonreserved classes are included.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 6 E — Canada's Forest Inventory – 1981

Area of STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by AGE CLASS, FOREST TYPE, and OWNERSHIP

Summary for Canada
Ownership: Undetermined

Forest Type	Age Classes						Total
	Regeneration	Immature	Mature	Overmature	Uneven-aged	Undetermined	
	Area (1 000 km²)						
Softwood	0.01	0.00	0.00	0.00	0.00	0.90	0.91
Mixedwood	0.00	0.00	0.00	0.00	0.00	0.86	0.86
Hardwood	0.00	0.00	0.00	0.00	0.00	0.71	0.71
Undetermined	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.01	0.00	0.00	0.00	0.00	2.47	2.48

Note: Totals may not add due to rounding.
For P.E.I., status is undetermined; both reserved and nonreserved classes are included.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 7 Canada's Forest Inventory – 1981

Area of STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by FOREST TYPE and SITE CLASS

Summary for Canada

Forest Type	Site Classes								Total
	1	2	3	4	5	6	7	Undetermined	
	Area (1 000 km²)								
Softwood	196.73	289.62	205.95	22.80	7.03	0.91	0.80	512.10	1 235.94
Mixedwood	100.44	86.16	92.03	7.77	0.48	0.14	0.10	145.85	432.96
Hardwood	9.77	54.93	66.26	14.42	0.65	0.32	0.10	93.07	239.53
Undetermined	0.00	0.01	0.04	0.00	0.00	0.00	0.00	4.82	4.87
Total	306.93	430.72	364.29	44.99	8.17	1.37	0.99	755.85	1 913.30

Note: Totals may not add due to rounding.

For P.E.I., status is undetermined; both reserved and nonreserved classes are included.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 8 Canada's Forest Inventory – 198

Area of STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by FOREST TYPE and OWNERSHIP

Summary for Canada

Forest Type	Ownership Classes					Total
	Federal	Provincial	Private	Municipal	Undetermined	
	Area (1 000 km²)					
Softwood	91.96	1 094.86	47.99	0.22	0.91	1 235.94
Mixedwood	94.92	278.67	58.45	0.06	0.86	432.96
Hardwood	10.31	175.12	53.04	0.35	0.71	239.53
Undetermined	0.09	0.21	4.57	0.00	0.00	4.87
Total	197.29	1 548.85	164.05	0.63	2.48	1 913.30

Note: Totals may not add due to rounding.

For P.E.I., status is undetermined; both reserved and nonreserved classes are included.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 9 — Canada's Forest Inventory – 1981

Area of STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by AGE CLASS and OWNERSHIP

Summary for Canada

Age Class	Ownership Classes					Total
	Federal	Provincial	Private	Municipal	Undetermined	
	Area (1 000 km²)					
Regeneration	27.95	116.91	14.89	0.05	0.01	159.81
Immature	118.54	644.60	93.25	0.47	0.00	856.86
Mature	49.87	592.57	46.10	0.11	0.00	688.65
Overmature	0.19	57.60	5.25	0.00	0.00	63.03
Uneven-aged	0.14	1.89	2.64	0.00	0.00	4.66
Undetermined	0.61	135.31	1.92	0.00	2.47	140.30
Total	197.29	1 548.87	164.05	0.63	2.48	1 913.31

Note: Totals may not add due to rounding.

For P.E.I., status is undetermined, both reserved and nonreserved classes are included.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 10 — Canada's Forest Inventory – 1981

Volume (Gross Merchantable) on STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by SPECIES GROUP and OWNERSHIP

Summary for Canada

Species Group	Ownership Classes					Total
	Federal	Provincial	Private	Municipal	Undetermined	
	Volume (1 000 m³)					
Spruce	11 965	5 821 731	268 757	386	12 552	6 115 391
Pine	8 130	2 949 803	82 577	702	63	3 041 274
Fir	5 709	2 479 506	222 087	443	7 507	2 715 253
Hemlock	6 115	1 174 284	42 617	937	200	1 224 153
Cedar	4 574	721 276	56 841	439	726	783 856
Douglas Fir	9 126	559 542	43 994	1 137	0	613 798
Coniferous unspecified	530 253	523 644	20 952	146	1 177	1 076 191
Total Coniferous	575 872	14 229 805	737 826	4 190	22 225	15 569 917
Aspen/Poplar	8 821	2 058 032	178 379	1 374	1 872	2 248 478
Birch	3 517	811 243	139 039	94	2 705	956 598
Maple	4 082	259 850	229 070	257	5 678	498 936
Deciduous unspecified	173 986	101 655	92 814	526	840	369 821
Total Deciduous	190 406	3 230 780	639 302	2 251	11 095	4 073 834
Total all species	766 277	17 460 585	1 377 128	6 441	33 320	19 643 751

Note: Totals may not add due to rounding.

For P.E.I., status is undetermined; both reserved and nonreserved classes are included.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 11 Canada's Forest Inventory – 1981

Volume (Gross Merchantable) on STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by AGE CLASS, FOREST TYPE, and OWNERSHIP

Summary for Canada
Ownership: All

Forest Type	Age Classes						Total
	Regeneration	Immature	Mature	Overmature	Uneven-aged	Undetermined	
	Volume (1 000 m^3)						
Softwood	111 084	3 761 733	8 911 551	530 503	12 024	595 840	13 922 735
Mixedwood	48 658	1 815 852	1 376 874	170 831	10 000	146 223	3 568 438
Hardwood	17 348	1 159 961	741 792	74 983	1 029	153 952	2 149 065
Undetermined	3 175	267	71	0	0	0	3 513
Total	180 264	6 737 813	11 030 289	776 316	23 053	896 015	19 643 751

Note: Totals may not add due to rounding.
For P.E.I., status is undetermined; both reserved and nonreserved classes are included.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 11 A Canada's Forest Inventory – 1981

Volume (Gross Merchantable) on STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by AGE CLASS, FOREST TYPE, and OWNERSHIP

Summary for Canada
Ownership: Federal

Forest Type	Age Classes						Total
	Regeneration	Immature	Mature	Overmature	Uneven-aged	Undetermined	
	Volume (1 000 m^3)						
Softwood	111	257 032	163 999	801	234	103	422 280
Mixedwood	335	106 306	178 277	168	374	28	285 488
Hardwood	89	19 981	33 054	79	104	5 199	58 505
Undetermined	4	0	0	0	0	0	4
Total	539	383 319	375 330	1 047	712	5 330	766 277

Note: Totals may not add due to rounding.
For P.E.I., status is undetermined; both reserved and nonreserved classes are included.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Volume (Gross Merchantable) on STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by AGE CLASS, FOREST TYPE, and OWNERSHIP

Summary for Canada
Ownership: Provincial

Forest Type	Age Classes						Total
	Regeneration	Immature	Mature	Overmature	Uneven-aged	Undetermined	
	Volume (1 000 m³)						
Softwood	103 328	3 297 152	8 542 606	503 329	2 456	576 692	13 025 564
Mixedwood	39 300	1 429 988	1 045 783	152 883	1 521	132 214	2 801 688
Hardwood	11 198	865 718	555 024	62 367	102	138 491	1 632 900
Undetermined	96	267	71	0	0	0	434
Total	153 922	5 593 125	10 143 484	718 579	4 079	847 396	17 460 585

Note: Totals may not add due to rounding.
For P.E.I., status is undetermined; both reserved and nonreserved classes are included.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Volume (Gross Merchantable) on STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by AGE CLASS, FOREST TYPE, and OWNERSHIP

Summary for Canada
Ownership: Private

Forest Type	Age Classes						Total
	Regeneration	Immature	Mature	Overmature	Uneven-aged	Undetermined	
	Volume (1 000 m³)						
Softwood	7 645	205 545	203 042	26 371	9 334	7 306	459 243
Mixedwood	9 022	279 159	152 750	17 780	8 105	2 400	469 216
Hardwood	6 060	272 829	153 086	12 531	824	263	445 593
Undetermined	3 075	0	0	0	0	0	3 075
Total	25 803	757 533	508 878	56 682	18 262	9 969	1 377 128

Note: Totals may not add due to rounding.
For P.E.I., status is undetermined; both reserved and nonreserved classes are included.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 11 D Canada's Forest Inventory – 1981

Volume (Gross Merchantable) on STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by AGE CLASS, FOREST TYPE, and OWNERSHIP

Summary for Canada
Ownership: Municipal

Forest Type	Age Classes						Total
	Regeneration	Immature	Mature	Overmature	Uneven-aged	Undetermined	
	Volume (1 000 m^3)						
Softwood	- -	2 003	1 904	1	0	0	3 909
Mixedwood	- -	399	65	0	0	0	465
Hardwood	- -	1 433	628	7	0	0	2 068
Undetermined	0	0	0	0	0	0	0
Total	- -	3 836	2 597	8	0	0	6 441

Note: Totals may not add due to rounding.
For P.E.I., status is undetermined; both reserved and nonreserved classes are included.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 11 E Canada's Forest Inventory – 1981

Volume (Gross Merchantable) on STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by AGE CLASS, FOREST TYPE, and OWNERSHIP

Summary for Canada
Ownership: Undetermined

Forest Type	Age Classes						Total
	Regeneration	Immature	Mature	Overmature	Uneven-aged	Undetermined	
	Volume (1 000 m^3)						
Softwood	0	0	0	0	0	11 739	11 739
Mixedwood	0	0	0	0	0	11 582	11 582
Hardwood	0	0	0	0	0	9 999	9 999
Undetermined	0	0	0	0	0	0	0
Total	0	0	0	0	0	33 320	33 320

Note: Totals may not add due to rounding.
For P.E.I., status is undetermined; both reserved and nonreserved classes are included.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 12 — Canada's Forest Inventory – 1981

Volume (Gross Merchantable) on STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by FOREST TYPE and SITE CLASS

Summary for Canada

Forest Type	Site Classes								Total
	1	2	3	4	5	6	7	Undetermined	
	Volume (1 000 m³)								
Softwood	1 412 714	3 939 887	3 485 203	955 117	379 798	67 049	34 841	3 648 125	13 922 735
Mixedwood	244 348	789 306	1 077 536	127 219	12 205	3 522	1 400	1 312 902	3 568 438
Hardwood	37 126	400 615	688 945	178 989	9 131	7 038	2 088	825 133	2 149 065
Undetermined	0	74	255	0	0	0	0	3 184	3 513
Total	1 694 188	5 129 882	5 251 939	1 261 325	401 134	77 609	38 329	5 789 344	19 643 751

Note: Totals may not add due to rounding.

For P.E.I., status is undetermined; both reserved and nonreserved classes are included.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 13 — Canada's Forest Inventory – 1981

Volume (Gross Merchantable) on STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by FOREST TYPE and OWNERSHIP

Summary for Canada

Forest Type	Ownership Classes					Total
	Federal	Provincial	Private	Municipal	Undetermined	
	Volume (1 000 m³)					
Softwood	422 280	13 025 564	459 243	3 909	11 739	13 922 735
Mixedwood	285 488	2 801 688	469 216	465	11 582	3 568 438
Hardwood	58 505	1 632 900	445 593	2 068	9 999	2 149 065
Undetermined	4	434	3 075	0	0	3 513
Total	766 277	17 460 585	1 377 128	6 441	33 320	19 643 751

Note: Totals may not add due to rounding.

For P.E.I., status is undetermined; both reserved and nonreserved classes are included.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Volume (Gross Merchantable) on STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by AGE CLASS and OWNERSHIP

Summary for Canada

Age Class	Ownership Classes					Total
	Federal	Provincial	Private	Municipal	Undetermined	
	Volume (1 000 m^3)					
Regeneration	539	153 922	25 803	—	0	180 264
Immature	383 319	5 593 125	757 533	3 836	0	6 737 813
Mature	375 330	10 143 484	508 878	2 597	0	11 030 289
Overmature	1 047	718 579	56 682	8	0	776 316
Uneven-aged	712	4 079	18 262	0	0	23 053
Undetermined	5 330	847 396	9 969	0	33 320	896 015
Total	766 277	17 460 585	1 377 128	6 441	33 320	19 643 751

Note: Totals may not add due to rounding.

For P.E.I., status is undetermined; both reserved and nonreserved classes are included.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Volume per Hectare (Gross Merchantable) on STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by FOREST TYPE and SITE CLASS

Summary for Canada

Forest Type	Site Classes								Total
	1	2	3	4	5	6	7	Undetermined	
	Volume (m^3/ha)								
Softwood	72	136	169	419	540	736	437	71	113
Mixedwood	24	92	117	164	255	251	147	90	82
Hardwood	38	73	104	124	139	221	216	89	90
Undetermined	0	83	61	0	0	0	0	7	7
Total	55	119	144	280	491	566	387	77	103

Note: Totals are a weighted average volume per hectare based on the site class areas from Table N 7.

For P.E.I., status is undetermined; both reserved and nonreserved classes are included.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 16 Canada's Forest Inventory – 1981

Area of NONSTOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by DISTURBANCE and SITE CLASS

Summary for Canada

Disturbance	Site Classes								Total
	1	2	3	4	5	6	7	Undetermined	
	Area (1 000 km²)								
Cutover	0.06	0.70	0.00	0.00	0.00	0.00	0.00	17.25	18.02
Burn	0.17	0.28	0.00	0.00	0.00	0.00	0.00	49.72	50.17
Pest	0.03	0.21	0.00	0.00	0.00	0.00	0.00	0.02	0.25
Other	0.05	0.31	0.01	0.00	0.00	0.00	0.00	36.31	36.69
Undetermined	21.51	25.02	50.48	0.08	0.00	0.00	0.00	24.64	121.74
Total	21.81	26.51	50.50	0.08	0.00	0.00	0.00	127.95	226.86

Note: Totals may not add due to rounding.

For P.E.I., status is undetermined; both reserved and nonreserved classes are included.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table N 17 Canada's Forest Inventory – 1981

Area of NONSTOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by DISTURBANCE and OWNERSHIP

Summary for Canada

Disturbance	Ownership Classes					Total
	Federal	Provincial	Private	Municipal	Undetermined	
	Area (1 000 km²)					
Cutover	0.17	15.37	2.36	0.00	0.11	18.02
Burn	18.20	31.14	0.82	0.00	0.01	50.17
Pest	0.00	0.23	0.02	0.00	0.00	0.25
Other	0.17	30.06	6.19	0.01	0.25	36.69
Undetermined	1.20	114.12	6.37	0.05	0.00	121.74
Total	19.75	190.92	15.76	0.06	0.37	226.86

Note: Totals may not add due to rounding.

For P.E.I., status is undetermined; both reserved and nonreserved classes are included.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of NONSTOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by DISTURBANCE and DATE OF INVENTORY

Summary for Canada

Disturbance	Date of Inventory						Total
	Up to 1960	1961-1965	1966-1970	1971-1975	1976-1980	Undetermined	
	Area (1 000 km²)						
Cutover	0.00	0.01	2.72	10.75	4.54	0.00	18.02
Burn	0.06	0.32	20.01	21.71	8.08	0.00	50.17
Pest	0.00	0.00	0.00	0.12	0.13	0.00	0.25
Other	0.00	4.71	12.23	15.66	4.09	0.00	36.69
Undetermined	59.97	14.53	14.88	16.31	16.04	0.00	121.74
Total	60.03	19 56	49.84	64.56	32.87	0.00	226.86

Note: Totals may not add due to rounding.

For P.E.I., status is undetermined; both reserved and nonreserved classes are included.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of NONRESERVED FOREST LAND by DATA SOURCE and DATE OF INVENTORY

Summary for Canada

Data Source	Date of Inventory						Total
	Up to 1960	1961-1965	1966-1970	1971-1975	1976-1980	Undetermined	
	Area (1 000 km²)						
Reconnaissance	245.04	16.54	134.03	254.77	154.46	0.00	804.84
Regional	25.34	78.02	115.13	154.04	164.51	0.00	537.04
Management	0.00	111.42	327.05	923.93	361.09	0.00	1 723.48
Operational	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CLI	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Satellite	0.00	0.00	0.00	20.26	69.13	0.00	89.39
Undetermined	0.00	3.32	0.00	0.00	0.00	0.00	3.32
Total	270.38	209.30	576.21	1 353.01	749.18	0.00	3 158.07

Note: Totals may not add due to rounding.

For P.E.I., status is undetermined; both reserved and nonreserved classes are included.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Appendix 4
Summary tables of inventory data by province or territory

Table No.	Title
P 1	Area by province or territory and land and water
P 2	Area of land by province or territory and land class
P 3	Area of forest land by province or territory and ownership
P 4	Area of forest land by province or territory and status
P 5	Area of forest land by province or territory and productivity
P 6	Area of productive, nonreserved forest land by province or territory and stocking
P 7	Area of stocked, productive, nonreserved forest land by province or territory and ownership
P 8	Area of stocked, productive, nonreserved forest land by province or territory and site class
P 9	Area of stocked, productive, nonreserved forest land by province or territory and age class
P 10	Area of stocked, productive, nonreserved forest land by province or territory and forest type
P 11	Volume per hectare (gross merchantable) on stocked, productive, nonreserved forest land by province or territory and site class
P 12	Volume (gross merchantable) on stocked, productive, nonreserved forest land by province or territory and age class
P 13	Volume (gross merchantable) on stocked, productive, nonreserved forest land by province or territory and forest type
P 14	Coniferous volume (gross merchantable) on stocked, productive, nonreserved forest land by province or territory and species group
P 15	Deciduous volume (gross merchantable) on stocked, productive, nonreserved forest land by province or territory and species group
P 16	Area of nonstocked, productive, nonreserved forest land by province or territory and disturbance
P 17	Area of nonstocked, productive, nonreserved forest land by province or territory and ownership
P 18	Area by province or territory and date of inventory

Table P 1 Canada's Forest Inventory – 1981

Area by Province or Territory and LAND and WATER

Province or Territory	Land and Water Classes			Total
	Land	Water	Undetermined	
	Area (1 000 km²)			
Newfoundland	187.65	17.42	154.25	359.32
Nova Scotia	50.99	4.42	0.00	55.41
Prince Edward Island	5.65	0.10	0.00	5.75
New Brunswick	71.21	1.70	0.00	72.92
Quebec	661.78	71.00	0.00	732.79
Ontario	445.58	78.26	0.00	523.84
Manitoba	274.87	58.07	0.00	332.95
Saskatchewan	138.94	22.47	0.06	161.47
Alberta	434.63	19.60	7.87	462.09
British Columbia	815.50	23.61	0.00	839.11
Yukon Territory	476.33	6.36	0.00	482.69
Northwest Territories	910.21	182.72	0.00	1 092.93
Total	4 473.35	485.73	162.18	5 121.26

Note: Totals may not add due to rounding.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Table P 2 Canada's Forest Inventory – 1981

Area of LAND by Province or Territory and LAND CLASS

Province or Territory	Land Class			Total
	Forest	Nonforest	Undetermined	
	Area (1 000 km²)			
Newfoundland	142.40	45.25	154.25	341.90
Nova Scotia	41.49	9.50	0.00	50.99
Prince Edward Island	2.94	2.70	0.00	5.65
New Brunswick	64.52	6.68	0.01	71.21
Quebec	624.00	37.78	0.00	661.78
Ontario	431.91	13.29	0.37	445.58
Manitoba	239.75	35.12	0.00	274.87
Saskatchewan	123.43	15.50	0.07	139.00
Alberta	330.83	86.22	25.42	442.47
British Columbia	566.25	249.25	0.00	815.50
Yukon Territory	242.17	150.68	83.48	476.33
Northwest Territories	615.21	295.00	0.00	910.21
Total	3 424.91	946.99	263.60	4 635.50

Note: Totals may not add due to rounding.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of FOREST LAND by Province or Territory and OWNERSHIP

Province or Territory	Ownership Classes					Total
	Federal	Provincial	Private	Municipal	Undetermined	
	Area (1 000 km²)					
Newfoundland	1.51	134.90	5.98	0.01	0.00	142.40
Nova Scotia	1.18	10.88	29.43	0.00	0.00	41.49
Prince Edward Island	0.00	0.00	0.00	0.00	2.94	2.94
New Brunswick	1.58	30.54	32.40	0.00	0.00	64.52
Quebec	1.85	555.81	66.34	0.00	0.00	624.00
Ontario	6.94	381.46	43.44	0.00	0.07	431.91
Manitoba	3.70	230.87	4.61	0.57	0.00	239.75
Saskatchewan	4.94	118.49	0.00	0.00	0.00	123.43
Alberta	33.74	297.03	0.00	0.00	0.06	330.83
British Columbia	6.24	542.94	16.79	0.29	0.00	566.25
Yukon Territory	242.17	0.00	0.00	0.00	0.00	242.17
Northwest Territories	615.21	0.00	0.00	0.00	0.00	615.21
Total	919.06	2302.93	199.00	0.86	3.07	3 424.91

Note: Totals may not add due to rounding.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of FOREST LAND by Province or Territory and STATUS

Province or Territory	Status Classes						Total
	Reserved	Nonreserved				Undetermined	
		Assigned	Retained	Other	Total		
	Area (1 000 km²)						
Newfoundland	1.58	27.56	107.28	5.98	140.82	0.00	142.40
Nova Scotia	0.34	1.83	6.19	24.37	32.39	8.75	41.49
Prince Edward Island	0.00	0.00	0.00	0.00	0.00	2.94	2.94
New Brunswick	0.32	30.54	1.26	32.40	64.21	0.00	64.52
Quebec	0.63	197.71	359.32	66.31	623.35	0.03	624.00
Ontario	3.56	0.00	378.72	43.44	422.17	6.18	431.91
Manitoba	3.75	11.83	219.56	4.61	236.00	0.00	239.75
Saskatchewan	11.95	0.00	111.48	0.00	111.48	0.00	123.43
Alberta	33.90	0.00	296.93	0.00	296.93	0.00	330.83
British Columbia	9.97	5.95	533.26	17.08	556.28	0.00	566.25
Yukon Territory	2.12	0.00	67.26	0.00	67.26	172.80	242.17
Northwest Territories	10.97	0.05	604.19	0.00	604.24	0.00	615.21
Total	79.07	275.47	2 685.46	194.20	3 155.12	190.71	3 424.91

Note: Totals may not add due to rounding.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of FOREST LAND by Province or Territory and PRODUCTIVITY

Province or Territory	Productivity Classes			Total
	Productive	Unproductive	Undetermined	
	Area (1 000 km²)			
Newfoundland	84.55	57.85	0.00	142.40
Nova Scotia	29.21	3.52	8.75	41.49
Prince Edward Island	2.85	0.09	0.00	2.94
New Brunswick	62.00	2.53	0.00	64.52
Quebec	533.36	90.64	0.00	624.00
Ontario	376.98	54.92	0.01	431.91
Manitoba	139.37	100.24	0.14	239.75
Saskatchewan	89.14	34.18	0.11	123.43
Alberta	216.01	111.79	3.02	330.83
British Columbia	457.90	108.19	0.16	566.25
Yukon Territory	67.33	174.84	0.00	242.17
Northwest Territories	143.35	444.16	27.69	615.21
Total	2 202.05	1 182.96	39.90	3 424.91

Note: Totals may not add due to rounding.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of PRODUCTIVE, NONRESERVED FOREST LAND by Province or Territory and STOCKING

Province or Territory	Stocking Classes			Total
	Stocked	Nonstocked	Undetermined	
	Area (1 000 km²)			
Newfoundland	78.82	4.67	0.00	83.49
Nova Scotia	28.46	0.44	0.00	28.91
Prince Edward Island	2.48	0.37	0.00	2.85
New Brunswick	58.85	2.87	0.00	61.73
Quebec	488.71	44.04	0.02	532.77
Ontario	330.81	37.35	0.00	368.15
Manitoba	118.25	17.99	0.00	136.24
Saskatchewan	73.63	5.85	0.00	79.48
Alberta	133.20	65.38	0.00	198.58
British Columbia	413.43	29.73	7.55	450.71
Yukon Territory	49.28	17.98	0.00	67.26
Northwest Territories	137.39	0.19	0.03	137.60
Total	1 913.30	226.86	7.60	2 147.76

Note: Totals may not add due to rounding.
For Newfoundland, nonstocked area includes regeneration area.
For Alberta, the data are old, of doubtful accuracy. New inventory data will be available by 1984.
For P.E.I., status is undetermined: both reserved and nonreserved classes are included.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by Province or Territory and OWNERSHIP

Status: Nonreserved Total

Province or Territory	Ownership Classes					Total
	Federal	Provincial	Private	Municipal	Undetermined	
	Area (1 000 km²)					
Newfoundland	0.04	75.03	3.75	0.00	0.00	78.82
Nova Scotia	0.00	6.41	22.05	0.00	0.00	28.46
Prince Edward Island	0.00	0.00	0.00	0.00	0.00	0.00
New Brunswick	1.12	28.15	29.58	0.00	0.00	58.85
Quebec	1.21	430.38	57.12	0.00	0.00	488.71
Ontario	3.32	293.21	34.27	0.00	0.00	330.81
Manitoba	0.93	113.38	3.57	0.38	0.00	118.25
Saskatchewan	1.64	71.99	0.00	0.00	0.00	73.63
Alberta	0.00	133.20	0.00	0.00	0.00	133.20
British Columbia	2.38	397.10	13.70	0.25	0.00	413.43
Yukon Territory	49.28	0.00	0.00	0.00	0.00	49.28
Northwest Territories	137.39	0.00	0.00	0.00	0.00	137.39
Total	197.29	1 548.86	164.05	0.63	0.00	1 910.82

Note: Totals may not add due to rounding.
For P.E.I., data not available.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by Province or Territory and OWNERSHIP

Status: Nonreserved Assigned

Province or Territory	Ownership Classes					Total
	Federal	Provincial	Private	Municipal	Undetermined	
	Area (1 000 km²)					
Newfoundland	0.00	14.24	0.00	0.00	0.00	14.24
Nova Scotia	0.00	1.74	0.00	0.00	0.00	1.74
Prince Edward Island	0.00	0.00	0.00	0.00	0.00	0.00
New Brunswick	0.00	28.15	0.00	0.00	0.00	28.15
Quebec	0.00	175.36	0.00	0.00	0.00	175.36
Ontario	0.00	0.00	0.00	0.00	0.00	0.00
Manitoba	0.23	7.06	0.00	0.00	0.00	7.30
Saskatchewan	0.00	0.00	0.00	0.00	0.00	0.00
Alberta	0.00	0.00	0.00	0.00	0.00	0.00
British Columbia	0.00	3.55	0.00	0.00	0.00	3.55
Yukon Territory	0.00	0.00	0.00	0.00	0.00	0.00
Northwest Territories	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.23	230.10	0.00	0.00	0.00	230.34

Note: Totals may not add due to rounding.
For P.E.I., data not available.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by Province or Territory and OWNERSHIP

Status: Nonreserved Retained

Province or Territory	Ownership Classes					Total
	Federal	Provincial	Private	Municipal	Undetermined	
	Area (1 000 km²)					
Newfoundland	0.04	60.79	0.00	0.00	0.00	60.83
Nova Scotia	0.00	4.67	0.00	0.00	0.00	4.67
Prince Edward Island	0.00	0.00	0.00	0.00	0.00	0.00
New Brunswick	1.12	0.00	0.00	0.00	0.00	1.12
Quebec	1.21	255.02	0.00	0.00	0.00	256.22
Ontario	3.32	293.21	0.00	0.00	0.00	296.53
Manitoba	0.69	106.31	0.00	0.38	0.00	107.38
Saskatchewan	1.64	71.99	0.00	0.00	0.00	73.63
Alberta	0.00	133.20	0.00	0.00	0.00	133.20
British Columbia	2.38	393.55	0.00	0.00	0.00	395.93
Yukon Territory	49.28	0.00	0.00	0.00	0.00	49.28
Northwest Territories	137.39	0.00	0.00	0.00	0.00	137.39
Total	197.05	1 318.76	0.00	0.38	0.00	1 516.19

Note: Totals may not add due to rounding.
For P.E.I., data not available.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by Province or Territory and OWNERSHIP

Status: Nonreserved Other

Province or Territory	Ownership Classes					Total
	Federal	Provincial	Private	Municipal	Undetermined	
	Area (1 000 km²)					
Newfoundland	0.00	0.00	3.75	0.00	0.00	3.75
Nova Scotia	0.00	0.00	22.05	0.00	0.00	22.05
Prince Edward Island	0.00	0.00	0.00	0.00	0.00	0.00
New Brunswick	0.00	0.00	29.58	0.00	0.00	29.58
Quebec	0.00	0.00	57.12	0.00	0.00	57.12
Ontario	0.00	0.00	34.27	0.00	0.00	34.27
Manitoba	0.00	0.00	3.57	0.00	0.00	3.57
Saskatchewan	0.00	0.00	0.00	0.00	0.00	0.00
Alberta	0.00	0.00	0.00	0.00	0.00	0.00
British Columbia	0.00	0.00	13.70	0.25	0.00	13.95
Yukon Territory	0.00	0.00	0.00	0.00	0.00	0.00
Northwest Territories	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	164.05	0.25	0.00	164.30

Note: Totals may not add due to rounding.
For P.E.I., data not available.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by Province or Territory and SITE CLASS

Province or Territory	Site Classes 1	2	3	4	5	6	7	Undetermined	Total
	Area (1 000 km²)								
Newfoundland	3.03	12.33	0.15	0.00	0.00	0.00	0.00	63.31	78.82
Nova Scotia	19.08	9.23	0.15	0.00	0.00	0.00	0.00	0.00	28.46
Prince Edward Island	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.48	2.48
New Brunswick	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.85	58.85
Quebec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	488.71	488.71
Ontario	97.52	122.56	105.21	2.91	0.10	0.00	0.00	2.51	330.81
Manitoba	2.39	40.81	74.89	0.00	0.00	0.00	0.00	0.15	118.25
Saskatchewan	0.00	0.05	0.00	0.00	0.00	0.00	0.00	73.58	73.63
Alberta	16.88	41.29	72.71	0.00	0.00	0.00	0.00	2.33	133.20
British Columbia	54.51	181.38	110.39	42.08	8.07	1.37	0.99	14.66	413.45
Yukon Territory	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.28	49.28
Northwest Territories	113.55	23.06	0.78	0.00	0.00	0.00	0.00	0.00	137.39
Total	306.95	430.72	364.29	44.99	8.17	1.37	0.99	755.85	1 913.32

Note: Totals may not add due to rounding.

For P.E.I., status is undetermined; both reserved and nonreserved classes are included.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by Province or Territory and AGE CLASS

Province or Territory	Age Classes Regeneration	Immature	Mature	Overmature	Uneven-aged	Undetermined	Total
	Area (1 000 km²)						
Newfoundland	0.00	3.22	7.72	4.57	0.00	63.31	78.82
Nova Scotia	0.67	3.55	19.12	2.31	2.81	0.00	28.46
Prince Edward Island	0.01	0.00	0.00	0.00	0.00	2.47	2.48
New Brunswick	0.23	25.50	30.93	2.11	0.08	0.00	58.85
Quebec	69.53	140.65	278.53	0.00	0.00	0.00	488.71
Ontario	16.49	232.73	36.33	45.19	0.00	0.06	330.81
Manitoba	11.47	84.80	20.31	1.67	0.00	0.00	118.25
Saskatchewan	0.12	0.81	0.68	0.00	0.00	72.02	73.63
Alberta	15.62	90.24	18.36	7.03	0.00	1.95	133.20
British Columbia	18.78	163.05	229.83	0.00	1.77	0.00	413.43
Yukon Territory	19.64	26.22	2.93	0.00	0.00	0.49	49.28
Northwest Territories	7.25	86.09	43.90	0.15	0.00	0.00	137.39
Total	159.81	856.85	688.65	63.03	4.66	140.30	1 913.30

Note: Totals may not add due to rounding.

For P.E.I., status is undetermined; both reserved and nonreserved classes are included.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by Province or Territory and FOREST TYPE

Province or Territory	Forest Types				Total
	Softwood	Mixedwood	Hardwood	Undetermined	
	Area (1 000 km²)				
Newfoundland	72.97	5.04	0.81	0.00	78.82
Nova Scotia	13.86	9.08	5.52	0.00	28.46
Prince Edward Island	0.91	0.86	0.71	0.00	2.48
New Brunswick	22.29	28.16	8.40	0.00	58.85
Quebec	323.17	98.40	62.40	4.74	488.71
Ontario	170.67	105.41	54.66	0.06	330.81
Manitoba	85.60	16.00	16.65	0.00	118.25
Saskatchewan	42.29	12.46	18.87	0.02	73.63
Alberta	68.09	32.46	32.61	0.05	133.20
British Columbia	348.31	33.12	32.01	0.00	413.43
Yukon Territory	48.79	0.00	0.49	0.00	49.28
Northwest Territories	39.00	91.97	6.42	0.00	137.39
Total	1 235.94	432.96	239.53	4.87	1 913.30

Note: Totals may not add due to rounding.
For PE.I., status is undetermined, both reserved and nonreserved classes are included.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Volume per Hectare (Gross Merchantable) on STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by Province or Territory and SITE CLASS

Province or Territory	Site Classes								Total
	1	2	3	4	5	6	7	Undetermined	
	Volume (m³/ha)								
Newfoundland	62	74	100	0	0	0	0	56	59
Nova Scotia	66	82	104	0	0	0	0	0	71
Prince Edward Island	0	0	0	0	0	0	0	134	134
New Brunswick	0	0	0	0	0	0	0	88	88
Quebec	0	0	0	0	0	0	0	85	85
Ontario	64	98	125	184	114	0	0	0	97
Manitoba	41	36	64	0	0	0	0	0	54
Saskatchewan	0	0	0	0	0	0	0	66	66
Alberta	80	118	111	0	0	0	0	56	108
British Columbia	108	159	239	287	496	566	387	3	190
Yukon Territory	0	0	0	0	0	0	0	52	52
Northwest Territories	17	102	226	0	0	0	0	0	32
Total	55	119	144	280	491	566	387	77	103

Note: Totals are a weighted average volume per hectare based on the site class areas from Table P 8.
For PE.I., status is undetermined, both reserved and nonreserved classes are included.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Volume (Gross Merchantable) on STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by Province or Territory and AGE CLASS

Province or Territory	Age Classes						Total
	Regeneration	Immature	Mature	Overmature	Uneven-aged	Undetermined	
	Volume (1 000 m³)						
Newfoundland	0	0	69 053	42 285	0	351 659	462 996
Nova Scotia	780	12 161	139 086	28 094	22 341	0	202 463
Prince Edward Island	0	0	0	0	0	33 320	33 320
New Brunswick	—	153 765	353 051	8 394	712	0	515 923
Quebec	160 190	1 148 677	2 823 939	0	0	0	4 132 805
Ontario	16 698	2 150 952	466 704	563 243	0	0	3 197 598
Manitoba	0	371 189	238 871	24 312	0	0	634 372
Saskatchewan	1	17	39	0	0	483 960	484 017
Alberta	1 174	979 336	326 429	109 371	0	21 879	1 438 190
British Columbia	1 421	1 568 456	6 272 020	45	0	0	7 841 941
Yukon Territory	0	209 496	39 851	0	0	5 198	254 544
Northwest Territories	0	143 764	301 246	572	0	0	445 582
Total	180 264	6 737 813	11 030 289	776 316	23 053	896 015	19 643 751

Note: Totals may not add due to rounding.
In the Newfoundland Management Inventory, no volumes are obtained from immature forests.
For P.E.I., status is undetermined; reserved and nonreserved classes are included.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Volume (Gross Merchantable) on STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by Province or Territory and FOREST TYPE

Province or Territory	Forest Types				Total
	Softwood	Mixedwood	Hardwood	Undetermined	
	Volume (1 000 m³)				
Newfoundland	417 203	39 483	6 310	0	462 996
Nova Scotia	103 158	63 818	35 487	0	202 463
Prince Edward Island	11 738	11 582	9 999	0	33 320
New Brunswick	213 940	228 399	73 584	0	515 923
Quebec	2 587 935	941 964	599 731	3 175	4 132 805
Ontario	1 605 930	1 001 532	590 136	0	3 197 598
Manitoba	399 603	120 049	114 720	0	634 372
Saskatchewan	251 520	104 261	128 237	0	484 017
Alberta	674 671	427 499	335 682	338	1 438 190
British Columbia	7 273 647	357 713	210 581	0	7 841 941
Yukon Territory	249 347	0	5 198	0	254 544
Northwest Territories	134 043	272 137	39 401		445 582
Total	13 922 735	3 568 438	2 149 065	3 513	19 643 751

Note: Totals may not add due to rounding.
For P.E.I., status is undetermined; reserved and nonreserved classes are included.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Coniferous Volume (Gross Merchantable) on STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by Province or Territory and SPECIES GROUP

Province or Territory	Species Groups							
	Spruce	Pine	Fir	Hemlock	Cedar	Douglas-fir	Unspecified	Total
	Volume (1 000 m³)							
Newfoundland	46 320	261	47 233	0	0	0	335 076	428 890
Nova Scotia	76 050	12 282	38 082	7 876	0	0	2 573	136 862
Prince Edward Island	12 552	63	7 507	200	726	0	1 177	22 225
New Brunswick	153 665	19 947	117 851	6 054	37 317	0	2 751	337 584
Quebec	1 780 328	226 036	977 627	25 069	70 388	0	9 830	3 089 276
Ontario	1 292 347	552 942	157 323	11 547	48 609	0	11 947	2 074 715
Manitoba	258 085	161 098	9 776	0	717	0	8 901	438 577
Saskatchewan	174 279	110 172	4 978	0	0	0	4 040	293 468
Alberta	394 490	344 445	33 136	0	0	8 907	125	781 102
British Columbia	1 927 277	1 614 030	1 321 740	1 173 407	626 100	604 892	170 432	7 437 877
Yukon Territory	0	0	0	0	0	0	214 629	214 629
Northwest Territories	0	0	0	0	0	0	314 712	314 712
Total	6 115 391	3 041 274	2 715 253	1 224 153	783 856	613 798	1 076 191	15 569 917

Note: Totals may not add due to rounding.

For P.E.I., status is undetermined, reserved and nonreserved classes are included.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Deciduous Volume (Gross Merchantable) on STOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by Province or Territory and SPECIES GROUP

Province or Territory	Species Groups					All Species Total
	Aspen/ Poplar	Birch	Maple	Unspecified	Total	
	Volume (1 000 m³)					
Newfoundland	1 794	13 800	260	18 253	34 106	462 996
Nova Scotia	6 453	0	36 913	22 236	65 601	202 463
Prince Edward Island	1 872	2 705	5 678	840	11 095	33 320
New Brunswick	32 429	46 158	76 201	23 551	178 339	515 923
Quebec	255 378	482 886	235 516	69 750	1 043 529	4 132 805
Ontario	609 265	337 313	138 801	37 503	1 122 882	3 197 598
Manitoba	171 485	19 074	0	5 236	195 795	634 372
Saskatchewan	175 439	13 641	817	652	190 549	484 017
Alberta	657 087	0	0	0	657 087	1 438 190
British Columbia	337 276	41 021	4 751	21 016	404 064	7 841 941
Yukon Territory	0	0	0	39 915	39 915	254 544
Northwest Territories	0	0	0	130 870	130 870	445 582
Total	2 248 478	956 598	498 936	369 821	4 073 834	19 643 751

Note: Totals may not add due to rounding.

For P.E.I., status is undetermined, reserved and nonreserved classes are included.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of NONSTOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by Province or Territory and DISTURBANCE

Province or Territory	Disturbance Classes					Total
	Cutover	Burn	Pest	Other	Undetermined	
	Area (1 000 km²)					
Newfoundland	2.85	1.21	0.24	0.35	0.03	4.67
Nova Scotia	0.00	0.00	0.00	0.00	0.44	0.44
Prince Edward Island	0.11	0.01	0.00	0.25	0.00	0.37
New Brunswick	1.24	0.27	0.00	1.36	0.00	2.87
Quebec	13.11	26.13	0.02	3.83	0.96	44.04
Ontario	0.01	0.00	0.00	0.00	37.34	37.35
Manitoba	0.00	0.00	0.00	0.00	17.99	17.99
Saskatchewan	0.68	4.18	0.00	0.99	0.00	5.85
Alberta	0.00	0.23	0.00	0.17	64.97	65.38
British Columbia	0.00	0.00	0.00	29.73	0.00	29.73
Yukon Territory	0.00	17.98	0.00	0.00	0.00	17.98
Northwest Territories	0.03	0.16	0.00	0.00	0.00	0.19
Total	18.02	50.17	0.25	36.69	121.74	226.86

Note: Totals may not add due to rounding.
For P.E.I., status is undetermined, both reserved and nonreserved classes are included.
This table excludes 28 000 km² of nonstocked, nonreserved forest land in the Northwest Territories, for which productivity is undetermined.
Some provincial inventories have incomplete data, or do not separate areas by cause of disturbance. Hence, the data for Quebec may appear excessive.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of NONSTOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by Province or Territory and OWNERSHIP

Status: Nonreserved Total

Province or Territory	Ownership Classes					Total
	Federal	Provincial	Private	Municipal	Undetermined	
	Area (1 000 km²)					
Newfoundland	0.00	3.98	0.68	0.00	0.00	4.67
Nova Scotia	0.00	0.07	0.38	0.00	0.00	0.44
Prince Edward Island	0.00	0.00	0.00	0.00	0.00	0.00
New Brunswick	0.13	0.97	1.78	0.00	0.00	2.87
Quebec	0.07	38.11	5.86	0.00	0.00	44.04
Ontario	1.08	31.50	4.77	0.00	0.00	37.35
Manitoba	0.13	17.49	0.32	0.05	0.00	17.99
Saskatchewan	0.03	5.82	0.00	0.00	0.00	5.85
Alberta	0.00	65.38	0.00	0.00	0.00	65.38
British Columbia	0.14	27.60	1.98	0.01	0.00	29.73
Yukon Territory	17.98	0.00	0.00	0.00	0.00	17.98
Northwest Territories	0.19	0.00	0.00	0.00	0.00	0.19
Total	19.75	190.92	15.76	0.06	0.00	226.49

Note: Totals may not add due to rounding.
For P.E.I., data not available.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of NONSTOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by Province or Territory and OWNERSHIP

Status: Nonreserved Assigned

Province or Territory	Ownership Classes					Total
	Federal	Provincial	Private	Municipal	Undetermined	
	Area (1 000 km²)					
Newfoundland	0.00	2.49	0.00	0.00	0.00	2.49
Nova Scotia	0.00	0.02	0.00	0.00	0.00	0.02
Prince Edward Island	0.00	0.00	0.00	0.00	0.00	0.00
New Brunswick	0.00	0.97	0.00	0.00	0.00	0.97
Quebec	0.00	9.76	0.00	0.00	0.00	9.76
Ontario	0.00	0.00	0.00	0.00	0.00	0.00
Manitoba	0.04	2.03	0.00	0.00	0.00	2.07
Saskatchewan	0.00	0.00	0.00	0.00	0.00	0.00
Alberta	0.00	0.00	0.00	0.00	0.00	0.00
British Columbia	0.00	0.29	0.00	0.00	0.00	0.29
Yukon Territory	0.00	0.00	0.00	0.00	0.00	0.00
Northwest Territories	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.04	15.55	0.00	0.00	0.00	15.59

Note: Totals may not add due to rounding.

For P.E.I., data not available.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of NONSTOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by Province or Territory and OWNERSHIP

Status: Nonreserved Retained

Province or Territory	Ownership Classes					Total
	Federal	Provincial	Private	Municipal	Undetermined	
	Area (1 000 km²)					
Newfoundland	0.00	1.49	0.00	0.00	0.00	1.50
Nova Scotia	0.00	0.05	0.00	0.00	0.00	0.05
Prince Edward Island	0.00	0.00	0.00	0.00	0.00	0.00
New Brunswick	0.13	0.00	0.00	0.00	0.00	0.13
Quebec	0.07	28.36	0.00	0.00	0.00	28.43
Ontario	1.08	31.50	0.00	0.00	0.00	32.58
Manitoba	0.08	15.45	0.00	0.05	0.00	15.59
Saskatchewan	0.03	5.82	0.00	0.00	0.00	5.85
Alberta	0.00	65.38	0.00	0.00	0.00	65.38
British Columbia	0.14	27.31	0.00	0.00	0.00	27.45
Yukon Territory	17.98	0.00	0.00	0.00	0.00	17.98
Northwest Territories	0.19	0.00	0.00	0.00	0.00	0.19
Total	19.71	175.36	0.00	0.05	0.00	195.12

Note: Totals may not add due to rounding.

For P.E.I., data not available.

Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area of NONSTOCKED, PRODUCTIVE, NONRESERVED FOREST LAND by Province or Territory and OWNERSHIP

Status: Nonreserved Other

Province or Territory	Ownership Classes					Total
	Federal	Provincial	Private	Municipal	Undetermined	
	Area (1 000 km²)					
Newfoundland	0.00	0.00	0.68	0.00	0.00	0.68
Nova Scotia	0.00	0.00	0.38	0.00	0.00	0.38
Prince Edward Island	0.00	0.00	0.00	0.00	0.00	0.00
New Brunswick	0.00	0.00	1.78	0.00	0.00	1.78
Quebec	0.00	0.00	5.86	0.00	0.00	5.86
Ontario	0.00	0.00	4.77	0.00	0.00	4.77
Manitoba	0.00	0.00	0.32	0.00	0.00	0.32
Saskatchewan	0.00	0.00	0.00	0.00	0.00	0.00
Alberta	0.00	0.00	0.00	0.00	0.00	0.00
British Columbia	0.00	0.00	1.98	0.01	0.00	1.99
Yukon Territory	0.00	0.00	0.00	0.00	0.00	0.00
Northwest Territories	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	15.76	0.01	0.00	15.77

Note: Totals may not add due to rounding.
For P.E.I., data not available.
Source: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Area by Province or Territory and DATE OF INVENTORY

Province or Territory	Date of Inventory						Total
	Up to 1960	1961-1965	1966-1970	1971-1975	1976-1980	Undetermined	
	Area (1 000 km²)						
Newfoundland	0.00	0.00	75.06	263.58	20.68	0.00	359.32
Nova Scotia	0.00	0.00	0.00	17.62	37.79	0.00	55.41
Prince Edward Island	0.00	0.00	0.00	0.00	5.75	0.00	5.75
New Brunswick	0.00	0.19	0.00	25.14	47.58	0.00	72.92
Quebec	0.00	0.00	60.22	459.42	213.16	0.00	732.79
Ontario	24.37	88.05	103.11	105.52	202.79	0.00	523.84
Manitoba	3.11	53.93	139.00	84.38	52.52	0.00	332.95
Saskatchewan	1.63	16.98	48.26	56.29	38.31	0.00	161.47
Alberta	356.19	20.02	1.10	65.17	19.61	0.00	462.09
British Columbia	0.00	85.25	220.54	475.80	57.52	0.00	839.11
Yukon Territory	0.00	0.00	482.69	0.00	0.00	0.00	482.69
Northwest Territories	102.90	46.68	95.64	414.02	433.69	0.00	1 092.93
Total	488.20	311.10	1 225.61	1 966.94	1 129.40	0.00	5 121.26

Note: Totals may not add due to rounding.
Sources: Provincial Forest Agencies and Forestry Statistics and Systems Branch, Canadian Forestry Service, Department of the Environment

Environment Canada Environnement Canada

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Bonnor, G. M.
Canada's forest inventory 1981.

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POOR

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